Complaint, Exhibit 3.

# U.S. Patent No. US 8,671,195 v. Vivint, Inc.
# Claims 1, 2, 3, 5, 6, 7, 8, 9, 11, 17, 18, 19, 21, 22, 23.

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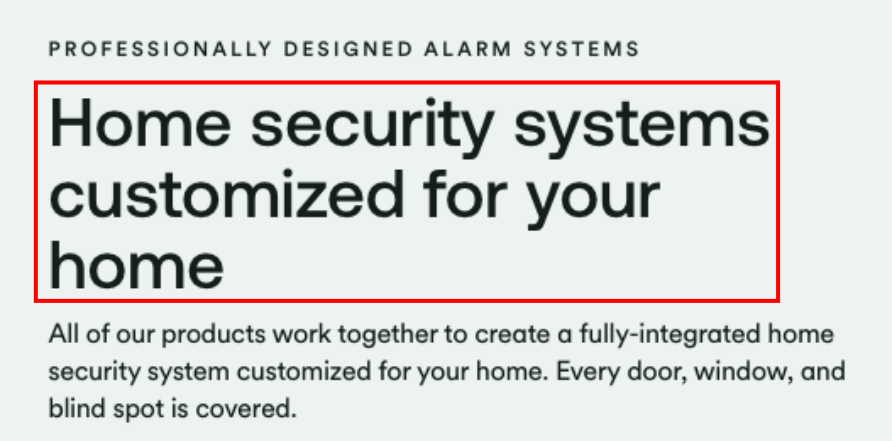
# 1. Claim Chart

| Claim | Analysis |
|---|---|
| [1.P] A digital media communication protocol, comprising: | Vivint ("Company") performs and/or induces others to perform a method of digital media communication protocol.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, Company provides a home security system, which includes automation products such as thermostats (used herein as an exemplary product), locks, cameras, and lighting. Further, these products operate using a smart home protocol ("digital media communication protocol") that enables devices to communicate with each other, exchange information, and control functions.<br><br>  <br>Source: https://www.vivint.com/packages/home-security |

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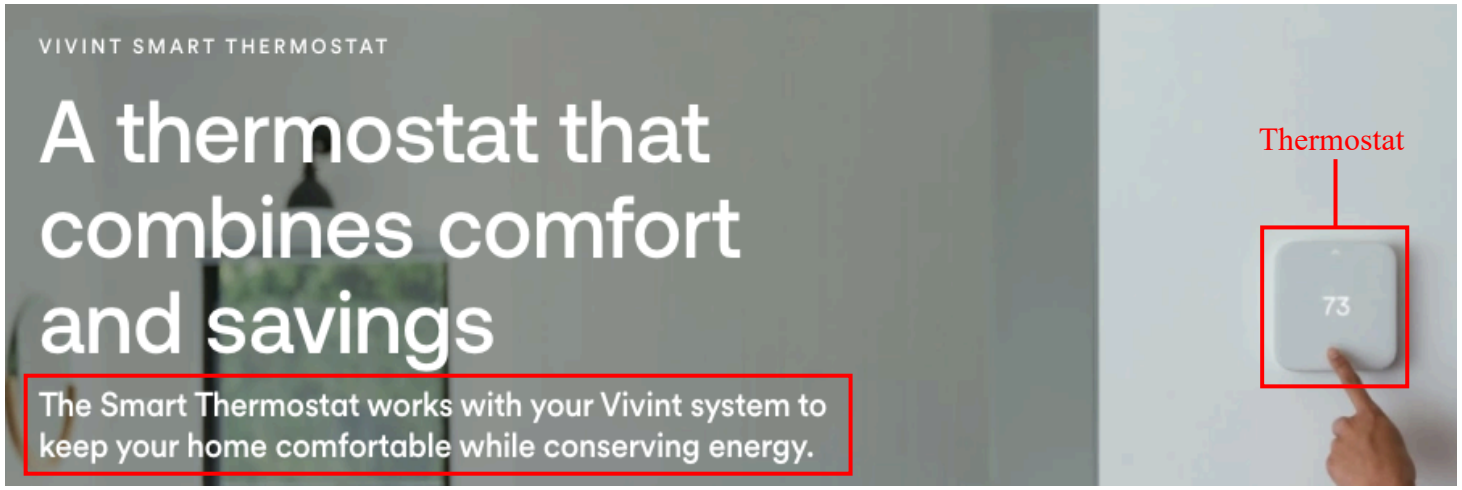
EXCLUSIVE TECHNOLOGY

## One connected system

If your home security system isn't easy to use, you'll never use it. That's why all of our security and automation products like locks, cameras, lighting, and thermostats connect on a simple platform that you control from the app or the hub. And they work seamlessly with smart voice assistants like Amazon Alexa and Google Assistant.

Source: https://www.vivint.com/packages/home-security




Source: https://www.vivint.com/products/smart-thermostat (annotated)

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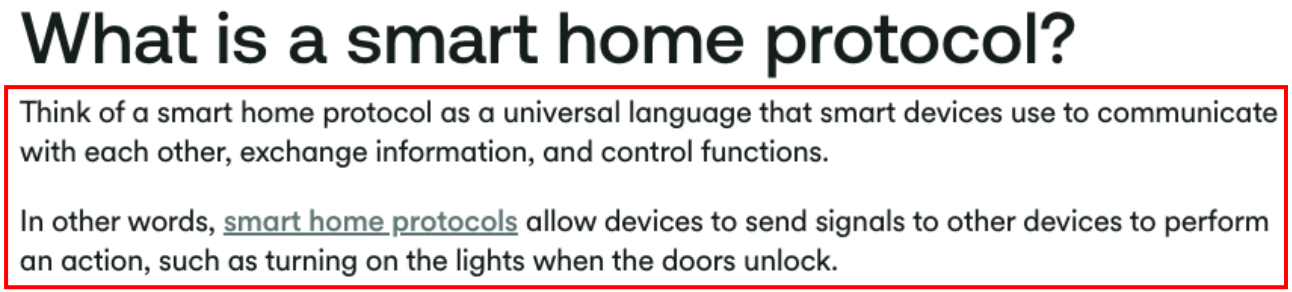
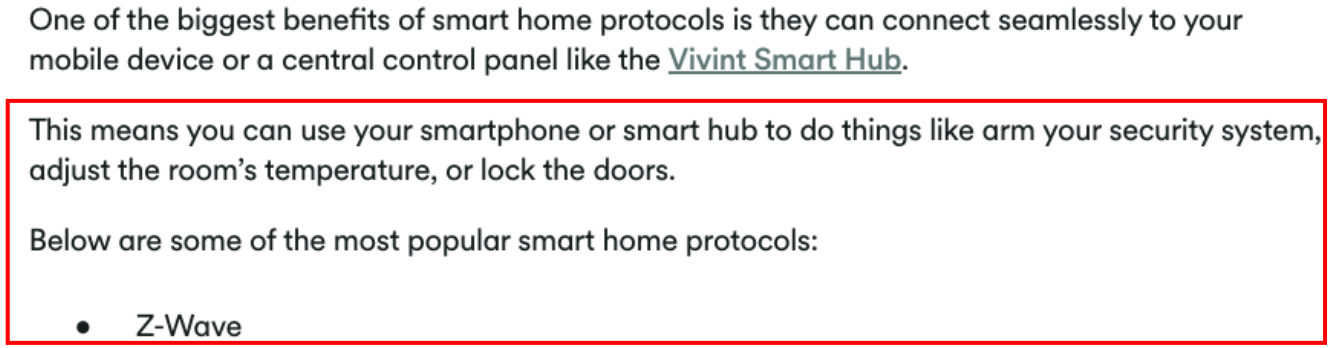
| |  <br>Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [1.1] at least one media terminal disposed in an accessible relation to at least one interactive computer network, | Company provides at least one media terminal disposed in an accessible relation to at least one interactive computer network.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, the smart thermostat is connected ("accessible relation") to the Vivint smart hub ("one media terminal") through the Z-wave smart home protocol ("at least one interactive computer network").<br><br>  <br>Source: https://www.vivint.com/resources/article/smart-home-technologies-guide |

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**Pair a thermostat to the panel/hub:** Media terminal

1. Unlock the unit's Installer Toolbox from the Site Manager software.
2. From the panel/hub home screen, select the menu icon (...) then **Software Version**.
3. Use the 4-digit code that appeared in Site Manager after unlocking the Installer Toolbox.
4. Select **Smart Home Devices**.
5. Select **Z-Wave**.
6. Select **Add Node**.
7. On the thermostat, hold the Vivint Smart Thermostat's side button down for about 6-10 seconds (there is a screen that will pop up after 2 seconds, the second Installer screen will pop up at about 6 seconds).
8. Go down to **Installer**.
9. Select **Network**.
10. Select **Connect**.

Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat (annotated)

## Specs

Color: White
Size: 4.5″ h x 4.5″ w x 0.9″ d
Weight: 10.1 oz (with batteries)
Power: 4 AA batteries or 24V AC wired from HVAC system
Screen: On-screen control
Sensors: Temperature, humidity, proximity, and ambient light
Supported Fuels: Natural gas, propane, electric, fuel oil, and geothermal
Compatibility: Works with conventional forced air, radiant, and heat pump, with up to 3 stages of heating and up to 2 stages of cooling
Connectivity: Z-Wave

Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat

Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.

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| [1.2] a wireless range structured to permit authorized access to said at least one interactive computer network, | Company provides a wireless range structured to permit authorized access to said at least one interactive computer network.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, to pair the thermostat device with the smart hub, the thermostat device must be within the range of 100 meters ("a wireless range") of the Z-wave protocol. Further, Z-Wave network and devices in the Z-wave network are identified with their respective unique IDs. The unique IDs prevents unauthorized devices to access the Z-wave network. Therefore, upon information and belief, the thermostat devices that are within the wireless range of the Z-wave protocol are structured to permit authorized access to pair with the smart hub.<br><br>**How far do Z-Wave connections reach?**<br><br>Z-Wave uses a mesh network topology, meaning the more devices you have in the same space, the stronger the network will be.<br><br>Z-Wave has a range of 328 feet in open air (or 100 meters).<br><br>Building materials may reduce this range, so try to have a Z-Wave device every 30 feet or closer.<br><br>Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br><br>In terms of identification and authorization, each Z-Wave network is identified by a network ID and each end device is identified with a node ID. The unique network ID prevents, for example, one Z-Wave-equipped house from controlling devices in another similarly equipped house.<br><br>Source: https://www.techtarget.com/iotagenda/definition/Z-Wave |

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| | Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [1.3] at least one media node disposable within said wireless range, wherein said at least one media node is detectable by said at least one media terminal, | Company provides at least one media node disposable within said wireless range, wherein said at least one media node is detectable by said at least one media terminal.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, the smart hub is paired to the thermostat ("one media node") when it is located within the range of the Z-Wave protocol ("disposable within said wireless range"). Further, during pairing, the smart hub searches for the nearby thermostat devices to get paired ("one media node is detectable by said at least one media terminal").<br><br>While Z-Wave has a range of 100 meters or 328 feet in open air, building materials reduce that range, it is recommended to have a Z-Wave device roughly every 30 feet, or closer for maximum efficiency. The Z-Wave signal can hop roughly 600 feet, and Z-Wave networks can be linked together for even larger deployments. Each Z-Wave network can support up to 232 Z-Wave devices allowing you the flexibility to add as many devices as you'd like to make sure your Smart Home is working it's hardest.<br><br>Source: https://www.z-wave.com/learn |

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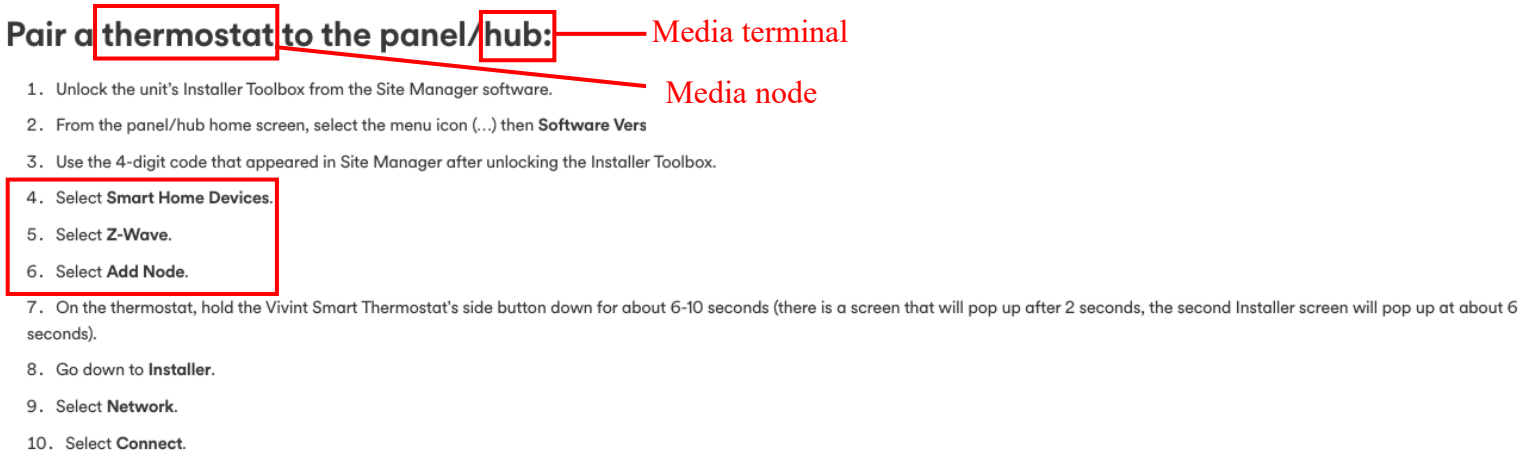
| |  <br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat (annotated)<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [1.4] at least one digital media file initially disposed on at least one of said at least one media terminal or said at least one media node, said at least one media | Company provides at least one digital media file initially disposed on at least one of said at least one media terminal or said at least one media node, said at least one media terminal being structured to detect said at least one media node disposed within said wireless range.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, to pair the thermostat to the smart hub, 'smart home devices' settings followed by 'Z-wave' and 'Add Node' settings are selected on the hub to pair with the thermostat. Further, when the thermostat's side button is held for 6 seconds, it starts searching ("said at least one media terminal being structured to detect said at least one media node") for the Z-wave network, and upon clicking the Connect button for the searched network, the thermostat is paired with the smart hub.<br><br>Furthermore, after the thermostat is connected to the smart hub, the smart hub allows users to control the thermostat by providing various functionalities on the smart hub such as changing room temperature, selecting different modes, and |

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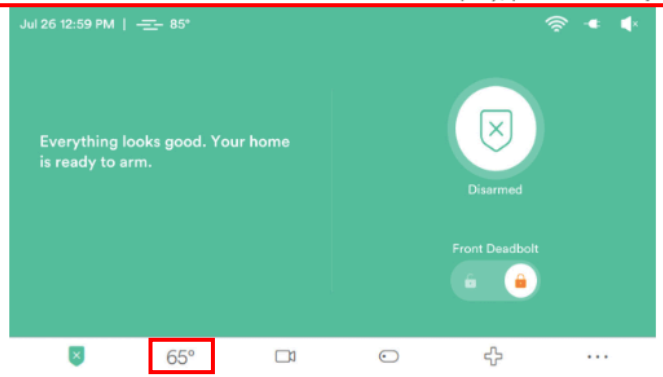
| terminal being structured to detect said at least one media node disposed within said wireless range, | adjusting heating types. Therefore, it would be apparent to a person having ordinary skill in the art that the smart hub stores the settings to adjust the temperature on the thermostat.<br><br>**Pair a thermostat to the panel/hub:**<br><br>1. Unlock the unit's Installer Toolbox from the Site Manager software.<br>2. From the panel/hub home screen, select the menu icon (...) then **Software Version**.<br>3. Use the 4-digit code that appeared in Site Manager after unlocking the Installer Toolbox.<br>4. Select **Smart Home Devices**.<br>5. Select **Z-Wave**.<br>6. Select **Add Node**.<br>7. On the thermostat, hold the Vivint Smart Thermostat's side button down for about 6-10 seconds (there is a screen that will pop up after 2 seconds, the second Installer screen will pop up at about 6 seconds).<br>8. Go down to **Installer**.<br>9. Select **Network**.<br>10. Select **Connect**.<br><br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat<br><br>**Vivint Smart Hub - Adjust Thermostat**<br><br>*How to adjust the thermostat temperature from the Smart Hub:*<br>1. From the home screen of the Smart Hub display, press the **Temperature** display icon on the bottom menu bar.<br><br>  |

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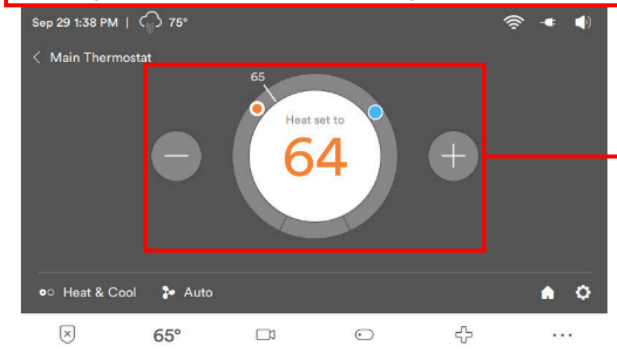
Source: https://support.vivint.com/article/Smart-Hub-Adjust-Thermostat

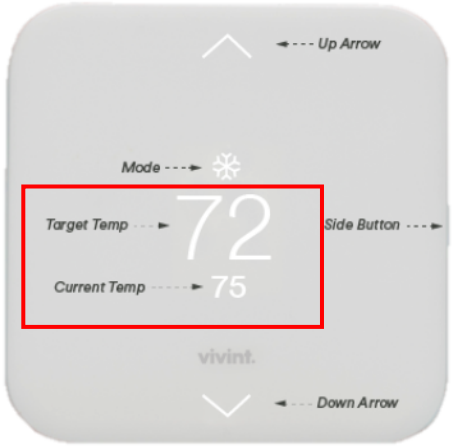
2. The temperature the thermostat is heating or cooling to will be displayed in the center. The current temperature in the home will be the smaller number on the edge of the circle. If you have more than one thermostat you will need to select the thermostat you want to adjust before you can change any settings.




Adjust Temperature

3. If the thermostat mode in the lower left corner is set to **Heat and Cool** you will need to tap on the orange or blue dot to change their temperature settings using the **Plus (+)** and **Minus(-)** icons.

Source: https://support.vivint.com/article/Smart-Hub-Adjust-Thermostat (annotated)



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| | Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [1.5] a communication link structured to dispose said at least one media terminal and said at least one media node in a communicative relation with one another via said at least one interactive computer network, | Company provides a communication link structured to dispose said at least one media terminal and said at least one media node in a communicative relation with one another via said at least one interactive computer network.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, when the pairing process is complete, a link ("communicative relation") is established between the thermostat and the smart hub via Z-wave protocol ("said at least one interactive computer network") such that the user adjusts the temperature on the thermostat via the smart hub.<br><br>One of the biggest benefits of smart home protocols is they can connect seamlessly to your mobile device or a central control panel like the Vivint Smart Hub.<br><br>This means you can use your smartphone or smart hub to do things like arm your security system, adjust the room's temperature, or lock the doors.<br><br>Below are some of the most popular smart home protocols:<br><br>• Z-Wave<br><br>Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br><br>**Smart home hub**<br><br>Think of a smart hub as the heart of your house — it connects all smart devices to create the right home automation experience.<br><br>Through the Vivint Smart Hub, you can control your door locks, view real-time camera footage of your home, and adjust the temperature — all through a single control panel. |

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| | Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [1.6] said communication link being initiated by said at least one media terminal, | Company provides communication link being initiated by said at least one media terminal.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, to pair the thermostat with the smart hub, 'smart home devices' settings followed by the 'Z-wave' and 'Add Node' settings are selected on the hub to pair with the thermostat ("said communication link being initiated by said at least one media terminal").<br><br>**Pair a thermostat to the panel/hub:**<br><br>1. Unlock the unit's Installer Toolbox from the Site Manager software.<br>2. From the panel/hub home screen, select the menu icon (...) then **Software Version**.<br>3. Use the 4-digit code that appeared in Site Manager after unlocking the Installer Toolbox.<br>4. Select **Smart Home Devices**.<br>5. Select **Z-Wave**.<br>6. Select **Add Node**.<br>7. On the thermostat, hold the Vivint Smart Thermostat's side button down for about 6-10 seconds (there is a screen that will pop up after 2 seconds, the second Installer screen will pop up at about 6 seconds).<br>8. Go down to **Installer**.<br>9. Select **Network**.<br>10. Select **Connect**.<br><br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |

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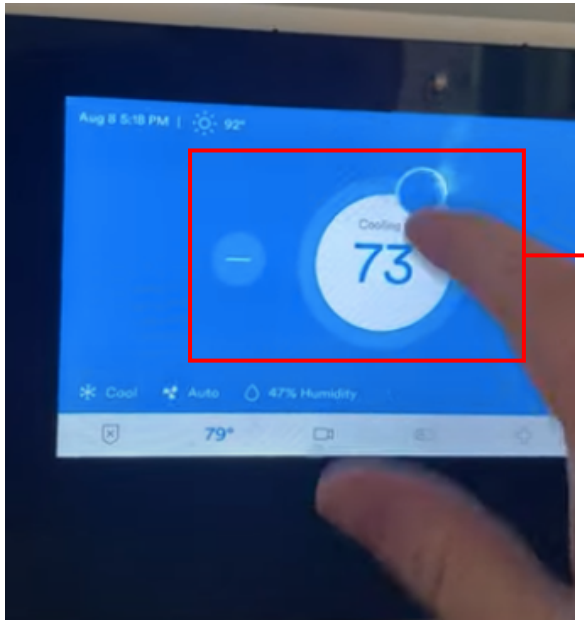
| [1.7] said at least one media node and said at least one media terminal being structured to transmit said at least one digital media file therebetween via said communication link, and | Company provides at least one media node and said at least one media terminal being structured to transmit said at least one digital media file therebetween via said communication link.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, once the pairing process is complete, the smart hub allows the users to adjust the temperature settings for the thermostat directly from the smart hub. When the user modifies the room temperature using the smart hub, the adjusted temperature is reflected on the connected thermostat device as the target temperature. Therefore, it would be apparent to a person having ordinary skill in the art that the modified temperature instruction ("digital media file") is transmitted from the smart hub to the thermostat via the established link.<br>  <br><br>Source: https://www.youtube.com/watch?v=NT36UmzH1A0, at 0:10 (annotated) |

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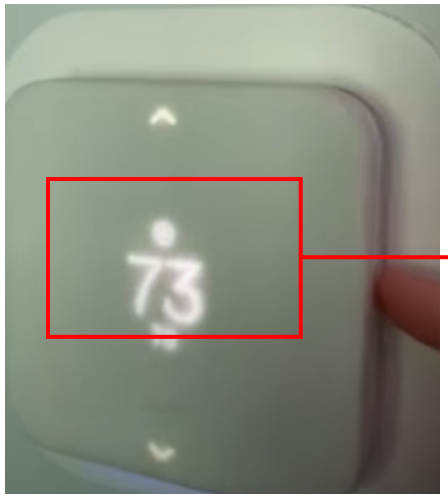
| |  <br>Source: https://www.youtube.com/watch?v=NT36UmzH1A0, at 0:57 (annotated)<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [1.8] said communication link is structured to bypass at least one media terminal security measure. | Company provides communication link is structured to bypass at least one media terminal security measure.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, once the devices are paired, a link is established between them, enabling the users to adjust the thermostat's temperature settings directly from the smart hub without the need to regularly pair the devices. As pairing is not necessary each time to make temperature adjustments via the smart hub, it would be apparent to a person having ordinary skill in the art that the established communication link is designed to bypass security measures related to the smart hub. |

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| | **Pair a thermostat to the panel/hub:**<br>1. Unlock the unit's Installer Toolbox from the Site Manager software.<br>2. From the panel/hub home screen, select the menu icon (...) then **Software Version**.<br>3. Use the 4-digit code that appeared in Site Manager after unlocking the Installer Toolbox.<br>4. Select **Smart Home Devices**.<br>5. Select **Z-Wave**.<br>6. Select **Add Node**.<br>7. On the thermostat, hold the Vivint Smart Thermostat's side button down for about 6-10 seconds (there is a screen that will pop up after 2 seconds, the second Installer screen will pop up at about 6 seconds).<br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [2] The digital media communication protocol recited in claim 1 wherein said digital media file is initially disposed on said at least one media node. | Company provides the digital media communication protocol recited in claim 1 wherein said digital media file is initially disposed on said at least one media node.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, the smart hub and the thermostat are fully integrated therefore, the reading on/measured by the thermostat ("digital media file is initially disposed on said at least one media node") is reflected on the smart hub.<br>The Vivint Smart Hub offers integrated, intelligent home automation and communication with smart connected devices* that can be accessed and controlled either directly at the panel or remotely with the Vivint apps. |

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| | Source: https://wwwassets.s3.amazonaws.com/global/vivint.com/Support/images/Vivint_SmartHubV2_GettingStartedGuide_ENU%20-%20revA.2.pdf , Page 13<br><br>**What is a smart thermostat?**<br><br>A smart thermostat, like the Vivint Smart Thermostat, uses built-in features like GPS, in-home sensors, and your personal preferences to automatically adjust your home's temperature. It also integrates with your smart home technology, allowing you to control your temperature from anywhere.<br>Source: https://www.vivint.com/products/smart-thermostat<br><br>  <br>Media Node<br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [3] The digital media communicati | Company provides the digital media communication protocol recited in claim 2 wherein said at least one media terminal is structured to display said at least one digital media file. |

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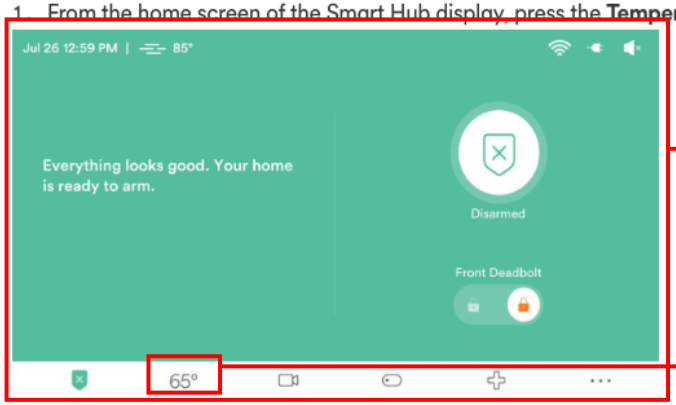
| on protocol recited in claim 2 wherein said at least one media terminal is structured to display said at least one digital media file. | This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, the smart hub and the thermostat are fully integrated therefore, the temperature measured by the thermostat is reflected on the smart hub ("said at least one media terminal is structured to display said at least one digital media file").<br><br>**Vivint Smart Hub - Adjust Thermostat**<br><br>*How to adjust the thermostat temperature from the Smart Hub:*<br>1. From the home screen of the Smart Hub display, press the **Temperature** display icon on the bottom menu bar.<br><br>  <br><br><br>Source: https://support.vivint.com/article/Smart-Hub-Adjust-Thermostat (annotated)<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [4] The digital media communication protocol recited in claim 2 wherein | Company provides the digital media communication protocol recited in claim 2 wherein said at least one media terminal is structured to store said at least one digital media file.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, the adjusted thermostat reading is reflected on the smart hub, and it remains constant on the smart hub until the reading is changed. Therefore, it would be apparent to a person having ordinary skill in the art that the smart hub is |

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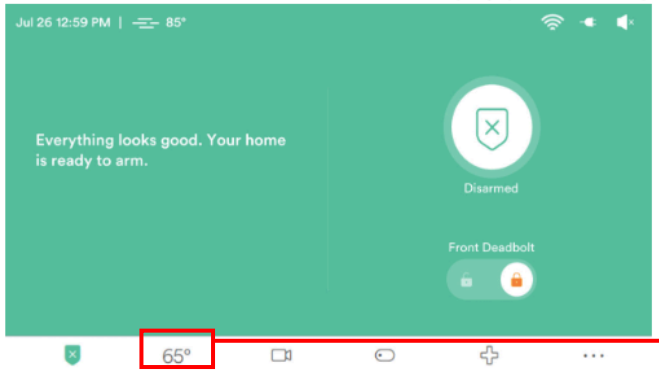
<table>
<tr>
<td>said at least one media terminal is structured to store said at least one digital media file.</td>
<td>structured to store the temperature readings (“said at least one media terminal is structured to store said at least one digital media file”).<br><br>Vivint Smart Hub - Adjust Thermostat<br><br>How to adjust the thermostat temperature from the Smart Hub:<br>1. From the home screen of the Smart Hub display, press the Temperature display icon on the bottom menu bar.<br> 

Thermostat reading stored on the media terminal<br>Source: https://support.vivint.com/article/Smart-Hub-Adjust-Thermostat (annotated)<br><br>Further, to the extent this element is performed at least in part by Defendant’s software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.</td>
</tr>
<tr>
<td>[5] The digital media communication protocol recited in claim 2 wherein said media terminal is structured to manipulate</td>
<td>Company provides the digital media communication protocol recited in claim 2 wherein said media terminal is structured to manipulate said at least one digital media file.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, the smart hub allows the users to adjust the temperature settings for the thermostat directly from the smart hub. When the user modifies the room temperature using the smart hub (“said media terminal is structured to manipulate said at least one digital media file”), the adjusted temperature is reflected on the connected thermostat device as the target temperature.</td>
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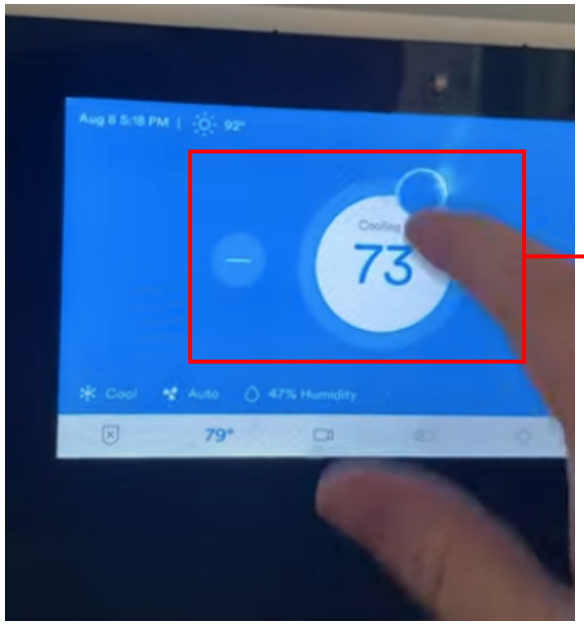
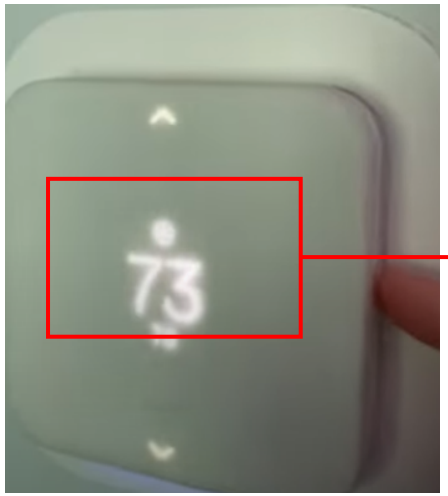
| said at least one digital media file. |  <br>User adjusting temperature to 73° F via smart hub<br>Source: https://www.youtube.com/watch?v=NT36UmzH1A0, at 0:10 (annotated)<br>  <br>Modified temperature (73° F) being displayed on thermostat device |

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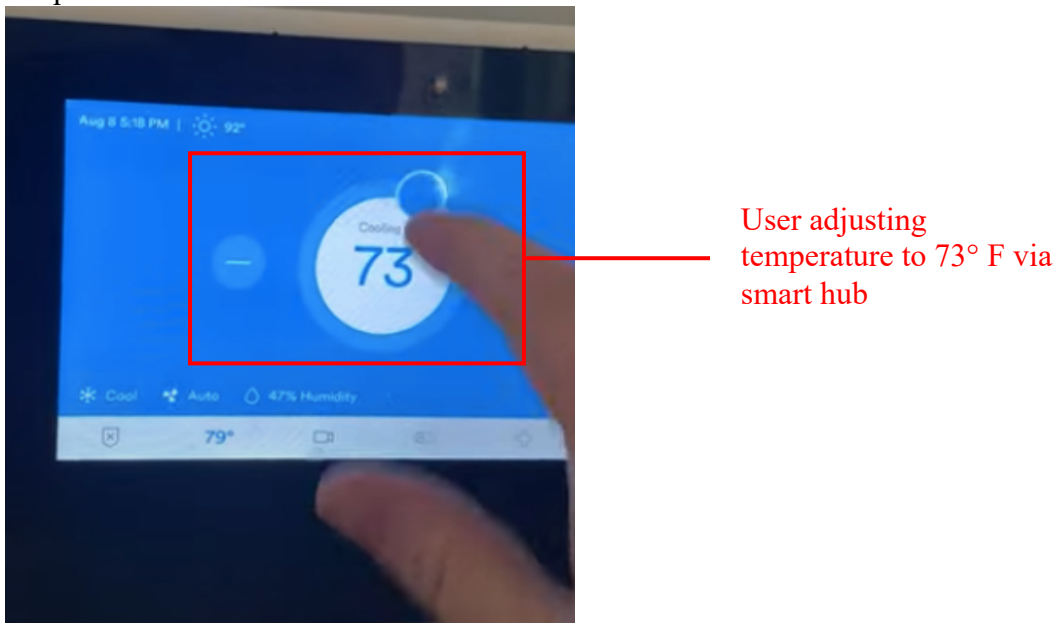
| | Source: https://www.youtube.com/watch?v=NT36UmzH1A0, at 0:57 (annotated)<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [6] The digital media communication protocol recited in claim 1 wherein said digital media file is initially disposed on said at least one media terminal. | Company provides the digital media communication protocol recited in claim 1 wherein said digital media file is initially disposed on said at least one media terminal.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, the smart hub allows the users to adjust the temperature settings for the thermostat directly from the smart hub. When the user modifies the room temperature using the smart hub ("digital media file is initially disposed on said at least one media terminal"), the adjusted temperature is reflected on the connected thermostat device as the target temperature.<br>  <br><br>Source: https://www.youtube.com/watch?v=NT36UmzH1A0, at 0:10 (annotated) |

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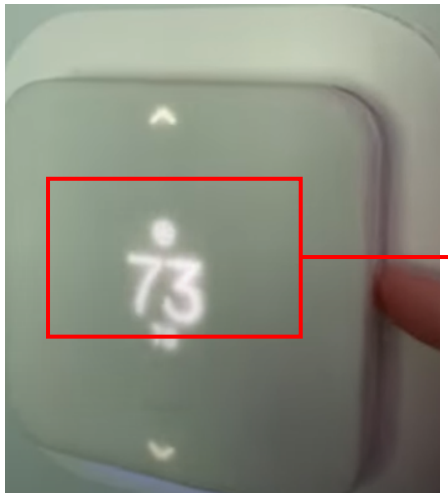
| |  <br>Source: https://www.youtube.com/watch?v=NT36UmzH1A0, at 0:57 (annotated)<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [7] The digital media communication protocol recited in claim 6 wherein said at least one media terminal is structured to transmit said at least one | Company provides the digital media communication protocol recited in claim 6 wherein said at least one media terminal is structured to transmit said at least one digital media file to said at least one media node via said communication link.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, the smart hub allows the users to adjust the temperature settings for the thermostat directly from the smart hub. When the user modifies the room temperature using the smart hub, the adjusted temperature is reflected on the connected thermostat device as the target temperature. Therefore, it would be apparent to a person having ordinary skill in the art that the modified temperature instruction ("digital media file") is transmitted from the smart hub to the thermostat via the established link. |

Complaint, Exhibit 3.

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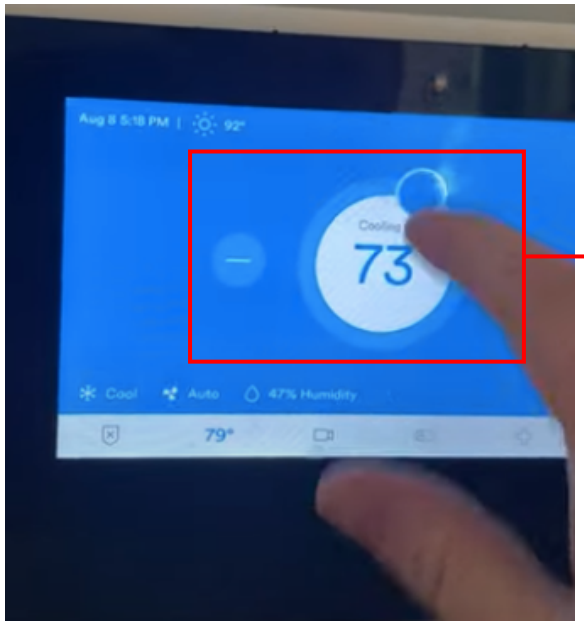
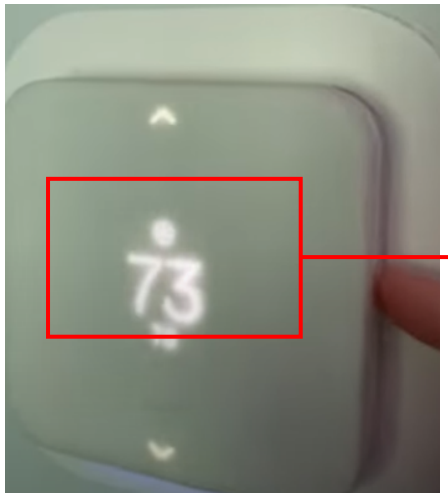
| digital media file to said at least one media node via said communication link. |  <br>Source: https://www.youtube.com/watch?v=NT36UmzH1A0, at 0:10 (annotated)<br>  |

Complaint, Exhibit 3.

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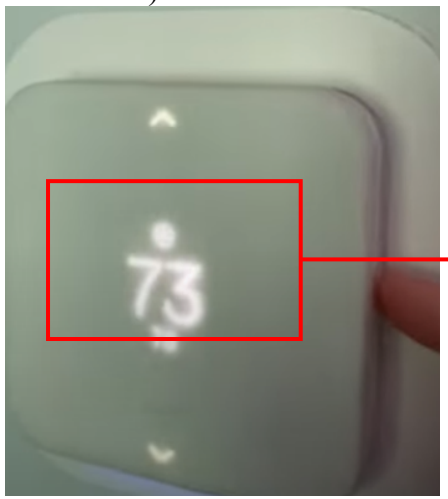
| | Source: https://www.youtube.com/watch?v=NT36UmzH1A0, at 0:57 (annotated)<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [8] The digital media communication protocol recited in claim 6 wherein said at least one media node is structured to display said digital media file. | Company provides the digital media communication protocol recited in claim 6 wherein said at least one media node is structured to display said digital media file.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, when the user modifies the room temperature using the smart hub, the adjusted temperature is reflected on the connected thermostat device as the target temperature ("at least one media node is structured to display said digital media file").<br>  <br><br>Source: https://www.youtube.com/watch?v=NT36UmzH1A0, at 0:57 (annotated)<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |

Complaint, Exhibit 3.

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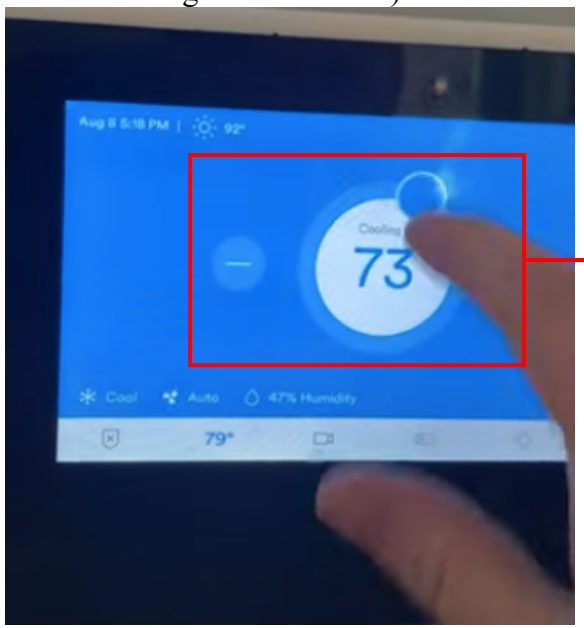
| [9] The digital media communication protocol recited in claim 6 wherein said at least one media node is structured to store said at least one digital media file. | Company provides the digital media communication protocol recited in claim 6 wherein said at least one media node is structured to store said at least one digital media file.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, the temperature reading adjusted via smart hub is displayed on the thermostat, and it remains constant on the thermostat until the reading is changed. Therefore, it would be apparent to a person having ordinary skill in the art that the thermostat is structured to store the temperature readings ("said at least one media node is structured to store said at least one digital media file").<br>  <br>Source: https://www.youtube.com/watch?v=NT36UmzH1A0, at 0:10 (annotated) |

Complaint, Exhibit 3.

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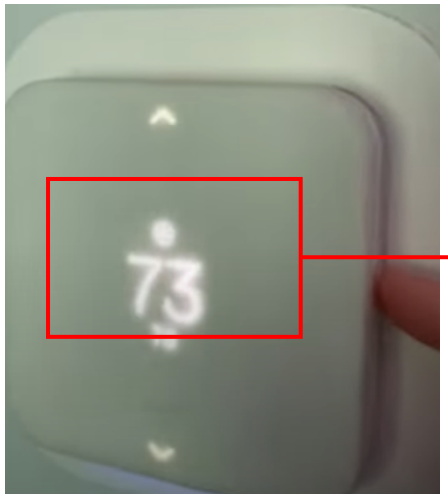
| |  <br>Source: https://www.youtube.com/watch?v=NT36UmzH1A0, at 0:57 (annotated)<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [10] The digital media communication protocol recited in claim 6 wherein said at least one media node is structured to manipulate said at least | Company provides the digital media communication protocol recited in claim 6 wherein said at least one media node is structured to manipulate said at least one digital media file.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, when the user modifies the room temperature using the smart hub, the adjusted temperature is reflected on the connected thermostat device as the target temperature. Furthermore, the thermostat device allows the user to adjust the temperature settings on the thermostat previously set via the smart hub ("one media node is structured to manipulate said at least one digital media file") or thermostat. |

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| one digital media file. | You can use the up and down arrows on the face of the Vivint Smart Thermostat to adjust the target temperature. When adjusting the temperature, the faceplate will illuminate to reveal the current and target temperature. The large number is the target temperature and the smaller number is the current temperature. You can also use your Vivint Sky mobile app to adjust the temperature remotely and access schedules.<br>  <br>Source: https://support.vivint.com/article/element-change-temperature<br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [11] The digital media communication protocol recited in claim 1 wherein said at least one media node includes a portable device. | Company provides the digital media communication protocol recited in claim 1 wherein said at least one media node includes a portable device.<br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br>For example, the thermostat device is a small wall-fitted device that indicates its portability ("one media node includes a portable device"). |

Complaint, Exhibit 3.

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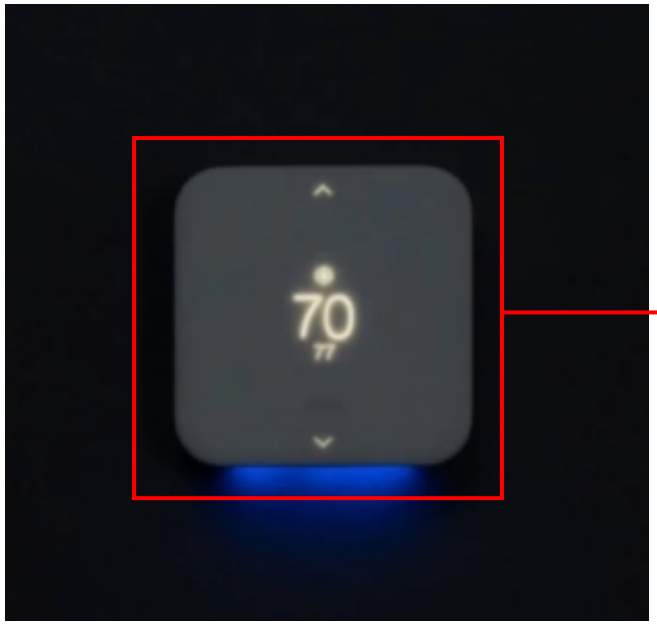
| |  <br>Source: https://www.vivint.com/products/smart-thermostat (annotated)<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [17.P] A digital media communication protocol, comprising: | Vivint ("Company") performs and/or induces others to perform a method of digital media communication protocol.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, Company provides a home security system, which includes automation products such as thermostats (used herein as an exemplary product), locks, cameras, and lighting. Further, these products operate using a smart home protocol ("digital media communication protocol") that enables devices to communicate with each other, exchange information, and control functions. |

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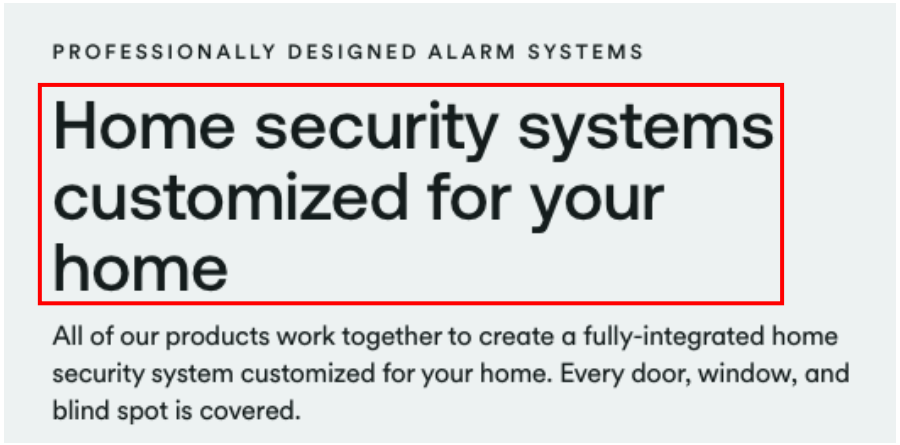
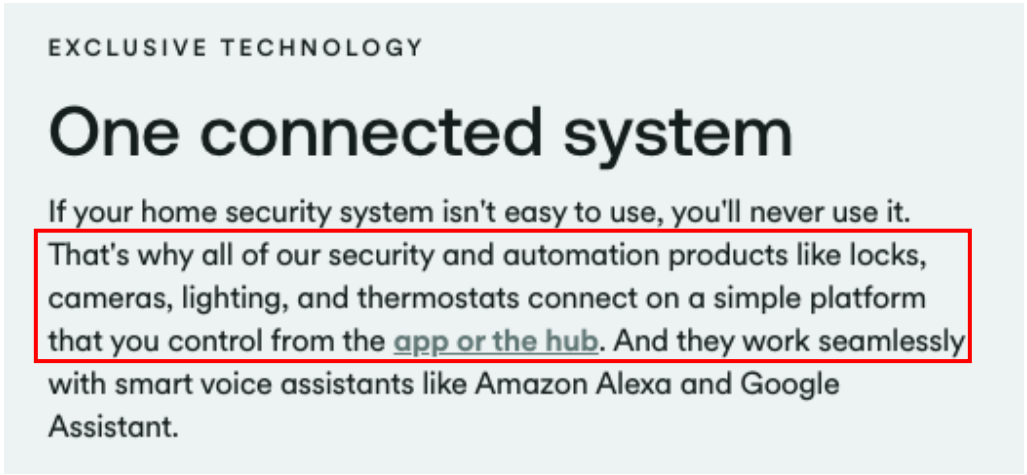



Source: https://www.vivint.com/packages/home-security




Source: https://www.vivint.com/packages/home-security

Complaint, Exhibit 3.

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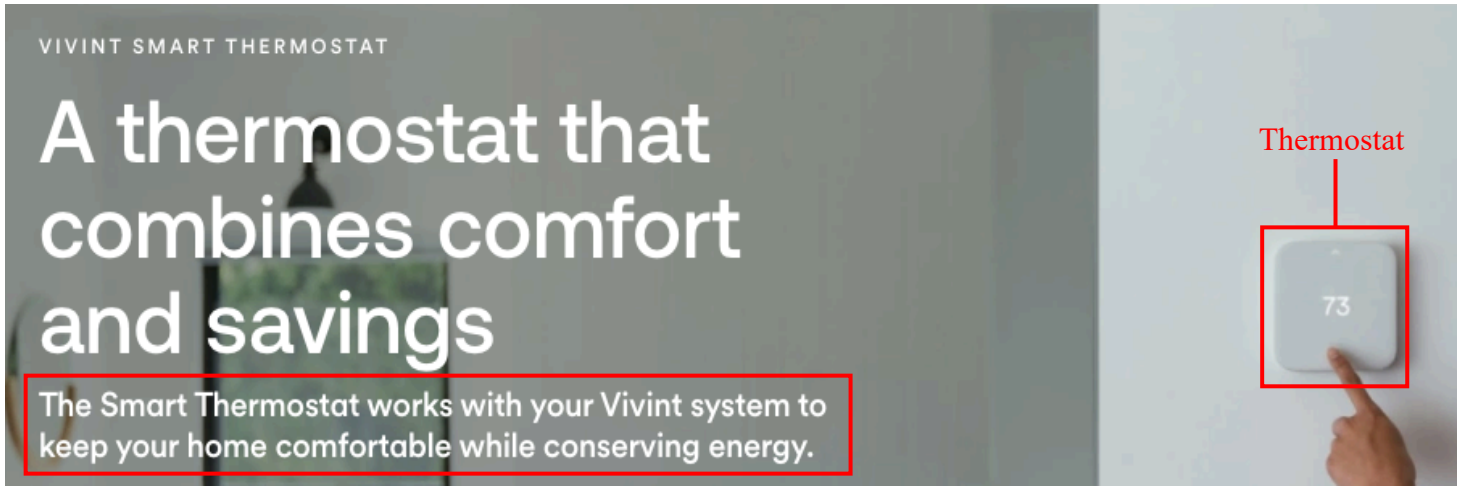
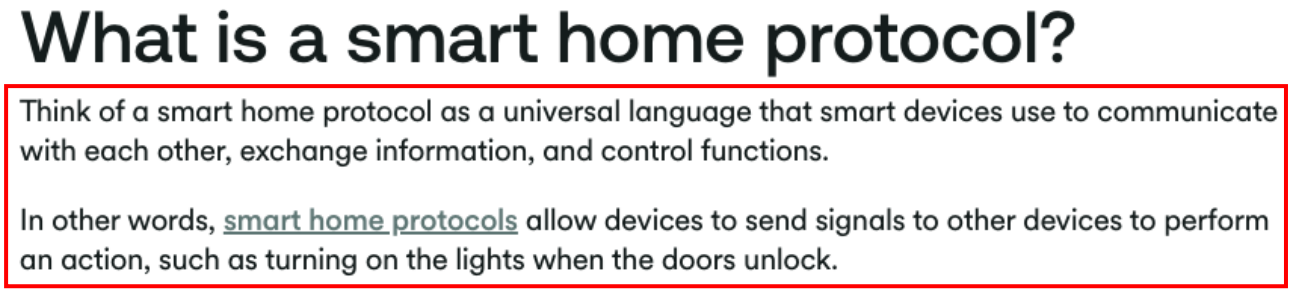
<tr><td></td><td> 

Source: https://www.vivint.com/products/smart-thermostat (annotated)<br><br>


Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br><br>
Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.</td></tr>
<tr><td>[17.1] at least one media terminal and at least one media node disposed in</td><td>Company provides at least one media terminal and at least one media node disposed in an accessible relation with at least one interactive computer network.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.</td></tr>
</table>

Complaint, Exhibit 3.

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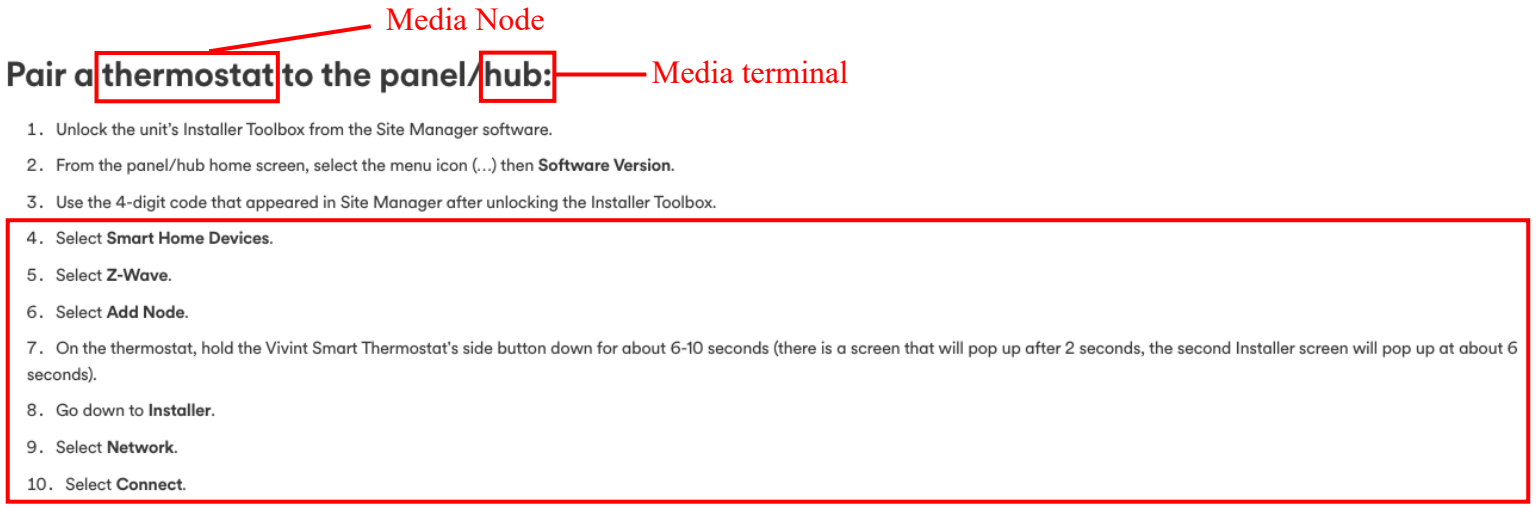
| an accessible relation with at least one interactive computer network, | For example, the smart thermostat ("media node") is connected ("accessible relation") to the Vivint smart hub ("media terminal") through the Z-wave smart home network ("at least one interactive computer network").<br><br>One of the biggest benefits of smart home protocols is they can connect seamlessly to your mobile device or a central control panel like the Vivint Smart Hub.<br><br>This means you can use your smartphone or smart hub to do things like arm your security system, adjust the room's temperature, or lock the doors.<br><br>Below are some of the most popular smart home protocols:<br><br>• Z-Wave<br><br>Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br><br>  <br><br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat (annotated) |

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| | **Specs**<br><br>Color: White<br>Size: 4.5″ h x 4.5″ w x 0.9″ d<br>Weight: 10.1 oz (with batteries)<br>Power: 4 AA batteries or 24V AC wired from HVAC system<br>Screen: On-screen control<br>Sensors: Temperature, humidity, proximity, and ambient light<br>Supported Fuels: Natural gas, propane, electric, fuel oil, and geothermal<br>Compatibility: Works with conventional forced air, radiant, and heat pump, with up to 3 stages of heating and up to 2 stages of cooling<br>Connectivity: Z-Wave<br><br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [17.2] at least one digital media file initially disposed on at least one of said media terminal or said media node, said at least one media terminal structured to detect said at least one media node, | Company provides at least one digital media file initially disposed on at least one of said media terminal or said media node, said at least one media terminal structured to detect said at least one media node.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, to pair the thermostat to the smart hub, 'smart home devices' settings followed by the "Z-wave" and "Add Node" settings are selected on the hub to pair with the thermostat and when the thermostat's side button is held for 6 seconds, it starts searching ("said at least one media terminal structured to detect said at least one media node") for the Z-wave network, and upon clicking the Connect button for the searched network, the thermostat is paired with the smart hub.<br>Furthermore, after the thermostat is connected to the smart hub, the smart hub allows users to control the thermostat by providing various functionalities on the smart hub such as changing room temperature, selecting different modes, and adjusting heating types. Therefore, it would be apparent to a person having ordinary skill in the art that the smart hub stores the settings to adjust the temperature on the thermostat. |

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**Pair a thermostat to the panel/hub:** — Media terminal

Media Node

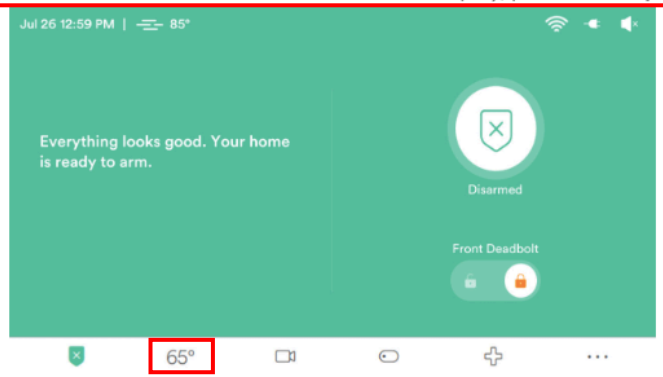
1. Unlock the unit's Installer Toolbox from the Site Manager software.
2. From the panel/hub home screen, select the menu icon (...) then **Software Version**.
3. Use the 4-digit code that appeared in Site Manager after unlocking the Installer Toolbox.
4. Select **Smart Home Devices**.
5. Select **Z-Wave**.
6. Select **Add Node**.
7. On the thermostat, hold the Vivint Smart Thermostat's side button down for about 6-10 seconds (there is a screen that will pop up after 2 seconds, the second Installer screen will pop up at about 6 seconds).
8. Go down to **Installer**.
9. Select **Network**.
10. Select **Connect**.

Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat (annotated)

## Vivint Smart Hub - Adjust Thermostat

*How to adjust the thermostat temperature from the Smart Hub:*

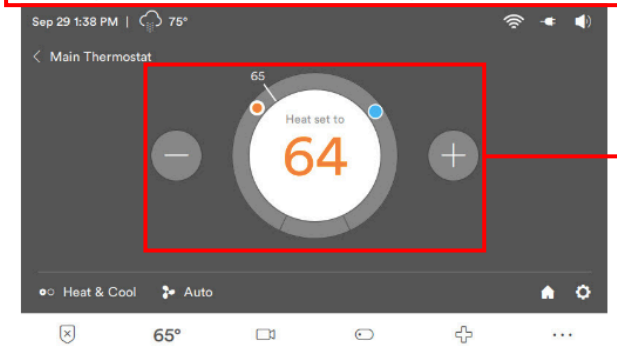
1. From the home screen of the Smart Hub display, press the **Temperature** display icon on the bottom menu bar.




Source: https://support.vivint.com/article/Smart-Hub-Adjust-Thermostat

Complaint, Exhibit 3.

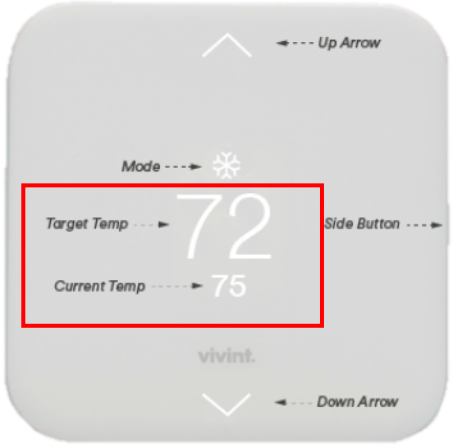
2. The temperature the thermostat is heating or cooling to will be displayed in the center. The current temperature in the home will be the smaller number on the edge of the circle. If you have more than one thermostat you will need to select the thermostat you want to adjust before you can change any settings.




Adjust Temperature

3. If the thermostat mode in the lower left corner is set to **Heat and Cool** you will need to tap on the orange or blue dot to change their temperature settings using the **Plus (+)** and **Minus(-)** icons.

Source: https://support.vivint.com/article/Smart-Hub-Adjust-Thermostat (annotated)




Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat

Complaint, Exhibit 3.

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| | Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [17.3] a communication link structured to dispose said at least one media terminal and said at least one media node in a communicative relation with one another via said interactive computer network, | Company provides a communication link structured to dispose said at least one media terminal and said at least one media node in a communicative relation with one another via said interactive computer network.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, when the pairing process is complete, a link ("communicative relation") is established between the thermostat and the smart hub via Z-wave protocol ("said interactive computer network") such that the user adjusts the temperature on the thermostat via the smart hub.<br><br>One of the biggest benefits of smart home protocols is they can connect seamlessly to your mobile device or a central control panel like the Vivint Smart Hub.<br><br>This means you can use your smartphone or smart hub to do things like arm your security system, adjust the room's temperature, or lock the doors.<br><br>Below are some of the most popular smart home protocols:<br><br>• Z-Wave<br><br>Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br><br>**Smart home hub**<br><br>Think of a smart hub as the heart of your house — it connects all smart devices to create the right home automation experience.<br><br>Through the Vivint Smart Hub, you can control your door locks, view real-time camera footage of your home, and adjust the temperature — all through a single control panel.<br><br>Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |

Complaint, Exhibit 3.

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| [17.4] said communication link being initiated by said at least one media terminal | Company provides the communication link being initiated by said at least one media terminal.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, to pair the thermostat to the smart hub, 'smart home devices' settings followed by the "Z-wave" and "Add Node" settings are selected on the hub to pair with the thermostat ("said communication link being initiated by said at least one media terminal").<br><br>**Pair a thermostat to the panel/hub:**<br><br>1. Unlock the unit's Installer Toolbox from the Site Manager software.<br>2. From the panel/hub home screen, select the menu icon (...) then **Software Version**.<br>3. Use the 4-digit code that appeared in Site Manager after unlocking the Installer Toolbox.<br>4. Select **Smart Home Devices**.<br>5. Select **Z-Wave**.<br>6. Select **Add Node**.<br>7. On the thermostat, hold the Vivint Smart Thermostat's side button down for about 6-10 seconds (there is a screen that will pop up after 2 seconds, the second Installer screen will pop up at about 6 seconds).<br>8. Go down to **Installer**.<br>9. Select **Network**.<br>10. Select **Connect**.<br><br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [17.5] said at least one media node and said at least one media terminal structured to transmit said | Company provides at least one media node and said at least one media terminal structured to transmit said at least one digital media file therebetween via said communication link.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, after the pairing process is complete, the smart hub allows the users to adjust the temperature settings for the thermostat directly from the smart hub. When the user modifies the room temperature using the smart hub, the adjusted temperature is reflected on the connected thermostat device as the target temperature. Therefore, it would be |

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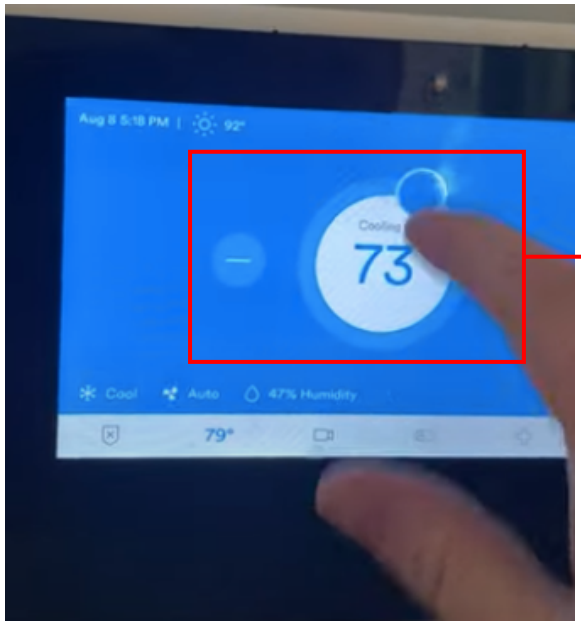
| at least one digital media file therebetween via said communication link, wherein | apparent to a person having ordinary skill in the art that the modified temperature instruction ("digital media file") is transmitted from the smart hub to the thermostat via the established link.<br>  <br><br>Source: https://www.youtube.com/watch?v=NT36UmzH1A0, at 0:10 (annotated) |

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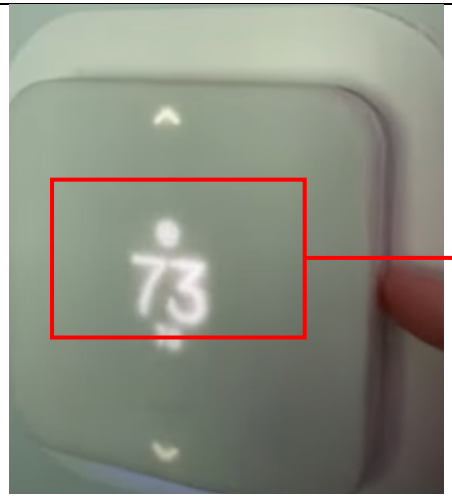
| |  <br>Source: https://www.youtube.com/watch?v=NT36UmzH1A0, at 0:57 (annotated)<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |

Complaint, Exhibit 3.

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| [17.6] said communication link is structured to bypass at least one media terminal security measure. | Company provides communication link is structured to bypass at least one media terminal security measure.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, once the devices are paired, a link is established between them, enabling the users to adjust the thermostat's temperature settings directly from the smart hub without the need to regularly pair the devices. As pairing is not necessary each time to make temperature adjustments via the smart hub, it would be apparent to a person having ordinary skill in the art that the established communication link is designed to bypass security measures related to the smart hub.<br><br>**Pair a thermostat to the panel/hub:**<br>1. Unlock the unit's Installer Toolbox from the Site Manager software.<br>2. From the panel/hub home screen, select the menu icon (...) then **Software Version**.<br>3. Use the 4-digit code that appeared in Site Manager after unlocking the Installer Toolbox.<br>4. Select **Smart Home Devices**.<br>5. Select **Z-Wave**.<br>6. Select **Add Node**.<br>7. On the thermostat, hold the Vivint Smart Thermostat's side button down for about 6-10 seconds (there is a screen that will pop up after 2 seconds, the second Installer screen will pop up at about 6 seconds).<br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [18] The digital media communication protocol recited in claim 17 further comprising a wireless range | Company provides digital media communication protocol recited in claim 17 further comprising a wireless range structured to permit authorized access to said at least one interactive computer network.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, to pair the thermostat device with the smart hub, the thermostat device must be within the range of 100 meters ("a wireless range") of the Z-wave protocol. Further, Z-Wave network and devices in the Z-wave network are identified with their respective unique IDs. The unique IDs prevents unauthorized devices to access the Z-wave network. Therefore, it would be apparent to a person having ordinary skill in the art that the thermostat devices that are within the wireless range of the Z-wave protocol are structured to permit authorized access to pair with the smart hub. |

Complaint, Exhibit 3.

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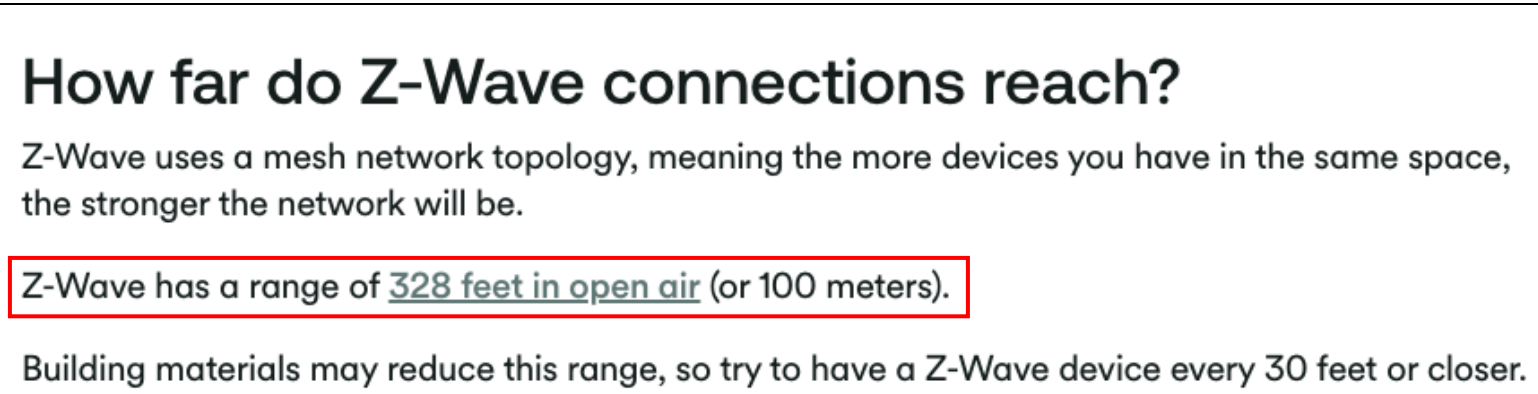
| structured to permit authorized access to said at least one interactive computer network. |  <br>Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br><br>In terms of identification and authorization, each Z-Wave network is identified by a network ID and each end device is identified with a node ID. The unique network ID prevents, for example, one Z-Wave-equipped house from controlling devices in another similarly equipped house.<br>Source: https://www.techtarget.com/iotagenda/definition/Z-Wave<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [19] The digital media communication protocol recited in claim 18 wherein | Company provides digital media communication protocol recited in claim 18 wherein said at least one media node is disposable within said wireless range and detectable by said at least one media terminal.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, the smart hub is paired to the thermostat ("one media node") when it is located within the range of the Z-Wave protocol ("disposable within said wireless range"). Further, during pairing, the smart hub searches for the nearby thermostat devices to get paired ("detectable by said at least one media terminal"). |

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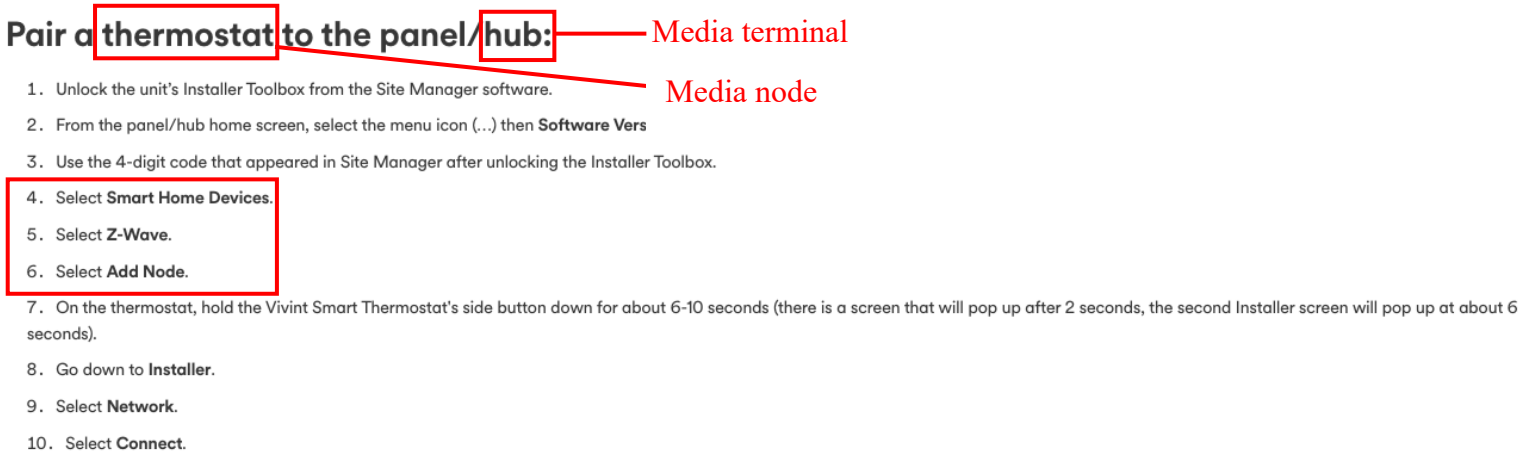
| said at least one media node is disposable within said wireless range and detectable by said at least one media terminal. | While Z-Wave has a range of 100 meters or 328 feet in open air, building materials reduce that range, it is recommended to have a Z-Wave device roughly every 30 feet, or closer for maximum efficiency. The Z-Wave signal can hop roughly 600 feet, and Z-Wave networks can be linked together for even larger deployments. Each Z-Wave network can support up to 232 Z-Wave devices allowing you the flexibility to add as many devices as you'd like to make sure your Smart Home is working it's hardest.<br><br>Source: https://www.z-wave.com/learn<br><br>  <br><br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat (annotated)<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [21.P] A digital media communication protocol, comprising: | Vivint ("Company") performs and/or induces others to perform a method of digital media communication protocol.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents. |

Complaint, Exhibit 3.

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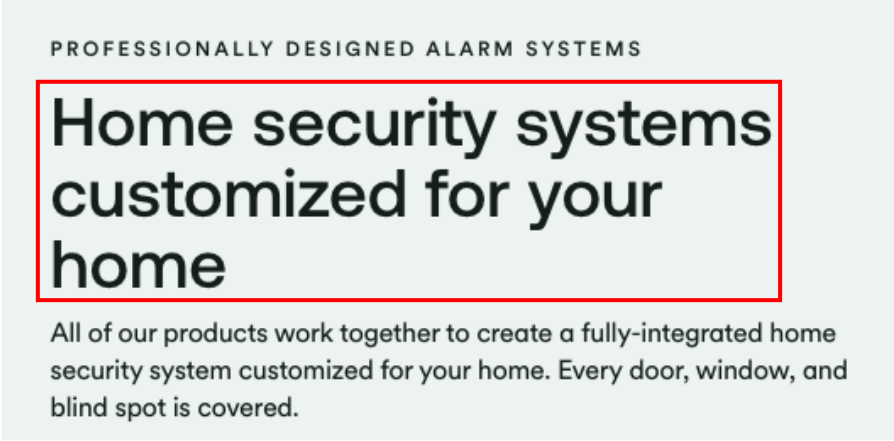
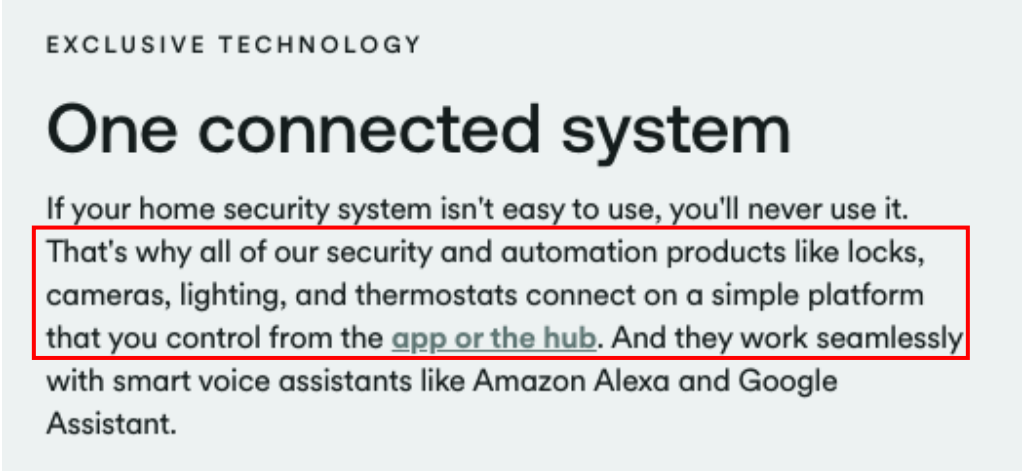
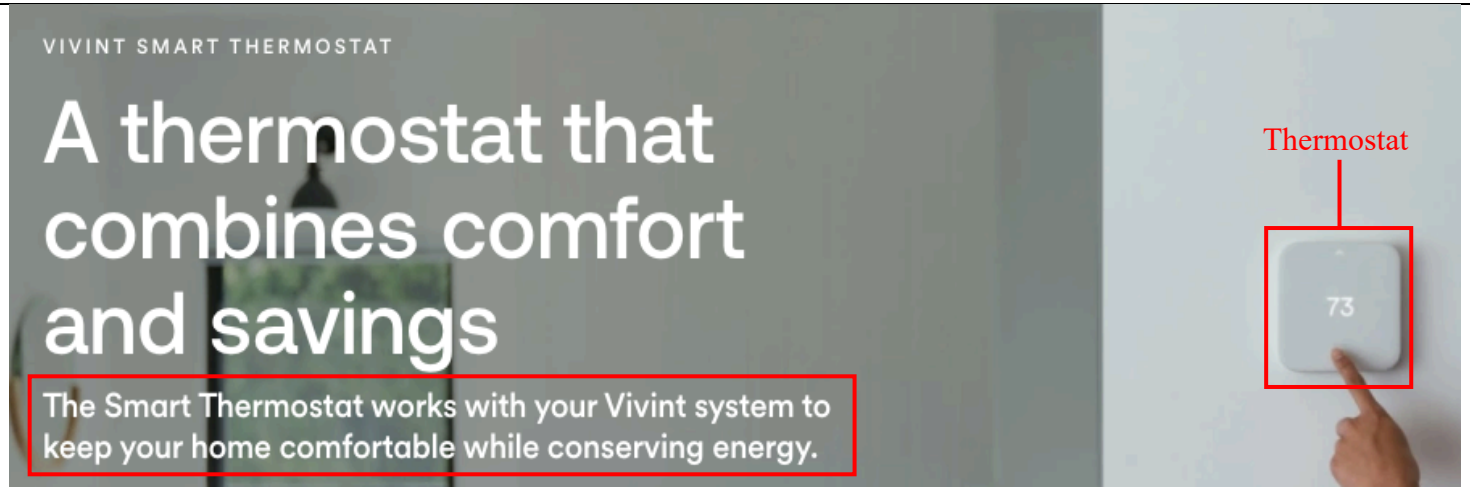
| | For example, Company provides a home security system, which includes automation products such as thermostats (used herein as an exemplary product), locks, cameras, and lighting. Further, these products operate using a smart home protocol ("digital media communication protocol") that enables devices to communicate with each other, exchange information, and control functions.<br>  <br><br>Source: https://www.vivint.com/packages/home-security<br>  <br><br>Source: https://www.vivint.com/packages/home-security |

Complaint, Exhibit 3.

<table>
<tr><td></td><td> 

Source: https://www.vivint.com/products/smart-thermostat (annotated)<br><br>
What is a smart home protocol?<br><br>
Think of a smart home protocol as a universal language that smart devices use to communicate with each other, exchange information, and control functions.<br><br>
In other words, smart home protocols allow devices to send signals to other devices to perform an action, such as turning on the lights when the doors unlock.<br>
Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br><br>
Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.</td></tr>
<tr><td>[21.1] at least one media terminal disposed in an accessible relation to at</td><td>Company provides at least one media terminal disposed in an accessible relation to at least one interactive computer network.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.</td></tr>
</table>

Complaint, Exhibit 3.

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| least one interactive computer network, | For example, the smart thermostat is connected ("accessible relation") to the Vivint smart hub ("one media terminal") through the Z-wave smart home protocol ("at least one interactive computer network").<br><br>One of the biggest benefits of smart home protocols is they can connect seamlessly to your mobile device or a central control panel like the Vivint Smart Hub.<br><br>This means you can use your smartphone or smart hub to do things like arm your security system, adjust the room's temperature, or lock the doors.<br><br>Below are some of the most popular smart home protocols:<br><br>• Z-Wave<br><br>Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br><br>**Pair a thermostat to the panel/hub:** — Media terminal<br><br>1. Unlock the unit's Installer Toolbox from the Site Manager software.<br>2. From the panel/hub home screen, select the menu icon (...) then **Software Version**.<br>3. Use the 4-digit code that appeared in Site Manager after unlocking the Installer Toolbox.<br>4. Select **Smart Home Devices**.<br>5. Select **Z-Wave**.<br>6. Select **Add Node**.<br>7. On the thermostat, hold the Vivint Smart Thermostat's side button down for about 6-10 seconds (there is a screen that will pop up after 2 seconds, the second Installer screen will pop up at about 6 seconds).<br>8. Go down to **Installer**.<br>9. Select **Network**.<br>10. Select **Connect**.<br><br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat (annotated) |

Complaint, Exhibit 3.

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| | **Specs**<br><br>Color: White<br>Size: 4.5″ h x 4.5″ w x 0.9″ d<br>Weight: 10.1 oz (with batteries)<br>Power: 4 AA batteries or 24V AC wired from HVAC system<br>Screen: On-screen control<br>Sensors: Temperature, humidity, proximity, and ambient light<br>Supported Fuels: Natural gas, propane, electric, fuel oil, and geothermal<br>Compatibility: Works with conventional forced air, radiant, and heat pump, with up to 3 stages of heating and up to 2 stages of cooling<br>Connectivity: Z-Wave<br><br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [21.2] a wireless range structured to permit authorized access to said at least one interactive computer network, | Company provides a wireless range structured to permit authorized access to said at least one interactive computer network.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, to pair the thermostat device with the smart hub, the thermostat device must be within the range of 100 meters ("a wireless range") of the Z-wave protocol. Further, Z-Wave network and devices in the Z-wave network are identified with their respective unique IDs. The unique IDs prevents unauthorized devices to access the Z-wave network. Therefore, it would be apparent to a person having ordinary skill in the art that the thermostat devices that are within the wireless range of the Z-wave protocol are structured to permit authorized access to pair with the smart hub. |

Complaint, Exhibit 3.

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| | **How far do Z-Wave connections reach?**<br>Z-Wave uses a mesh network topology, meaning the more devices you have in the same space, the stronger the network will be.<br>Z-Wave has a range of 328 feet in open air (or 100 meters).<br>Building materials may reduce this range, so try to have a Z-Wave device every 30 feet or closer.<br>Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br>In terms of identification and authorization, each Z-Wave network is identified by a network ID and each end device is identified with a node ID. The unique network ID prevents, for example, one Z-Wave-equipped house from controlling devices in another similarly equipped house.<br>Source: https://www.techtarget.com/iotagenda/definition/Z-Wave<br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [21.3] at least one media node disposed within said wireless range, said media node | Company provides at least one media node disposed within said wireless range, said media node including a portable device being detectable by said at least one media terminal.<br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br>For example, the smart hub is paired to the thermostat when it is located within the range of the Z-Wave protocol ("one media node disposed within said wireless range"). Further, during pairing, the smart hub searches for the nearby |

Complaint, Exhibit 3.

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| including a portable device being detectable by said at least one media terminal, | thermostat devices ("media node") to get paired ("one media node including a portable device being detectable by said at least one media terminal").<br><br>While Z-Wave has a range of 100 meters or 328 feet in open air, building materials reduce that range, it is recommended to have a Z-Wave device roughly every 30 feet, or closer for maximum efficiency. The Z-Wave signal can hop roughly 600 feet, and Z-Wave networks can be linked together for even larger deployments. Each Z-Wave network can support up to 232 Z-Wave devices allowing you the flexibility to add as many devices as you'd like to make sure your Smart Home is working it's hardest.<br><br>Source: https://www.z-wave.com/learn<br><br>**Pair a thermostat to the panel/hub:** — Media terminal<br>Media node<br>1. Unlock the unit's Installer Toolbox from the Site Manager software.<br>2. From the panel/hub home screen, select the menu icon (...) then **Software Vers**<br>3. Use the 4-digit code that appeared in Site Manager after unlocking the Installer Toolbox.<br>4. Select **Smart Home Devices**.<br>5. Select **Z-Wave**.<br>6. Select **Add Node**.<br>7. On the thermostat, hold the Vivint Smart Thermostat's side button down for about 6-10 seconds (there is a screen that will pop up after 2 seconds, the second Installer screen will pop up at about 6 seconds).<br>8. Go down to **Installer**.<br>9. Select **Network**.<br>10. Select **Connect**.<br><br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat (annotated)<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [21.4] at least one digital media file | Company provides at least one digital media file disposed on at least one of said at least one media terminal or said at least one media node, said at least one media terminal structured to detect said at least one media node. |

Complaint, Exhibit 3.

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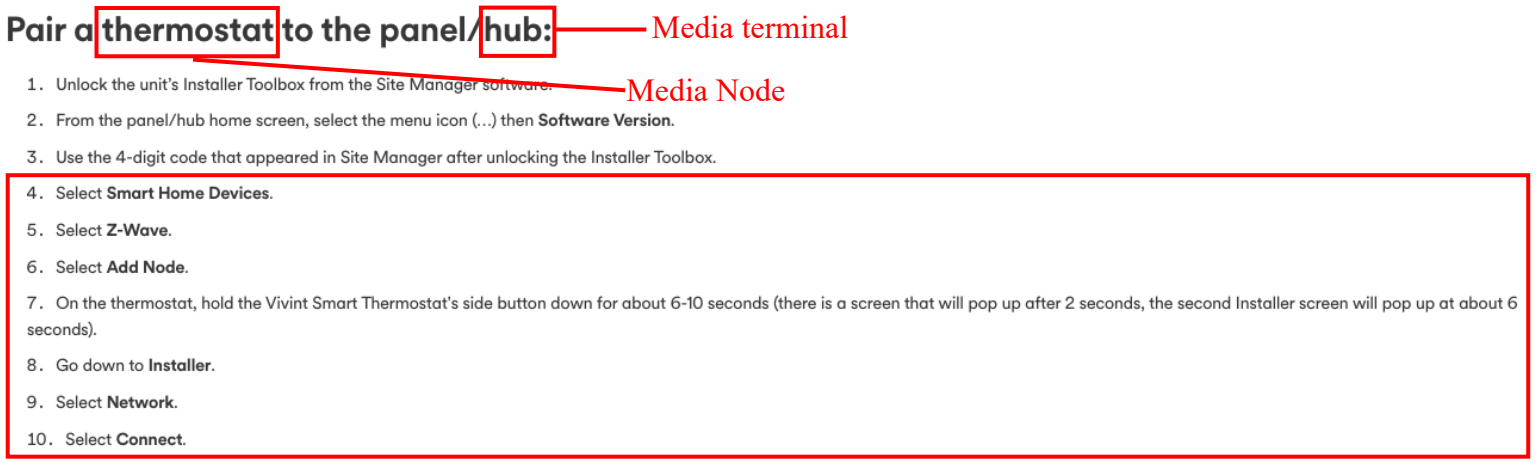
| disposed on at least one of said at least one media terminal or said at least one media node, said at least one media terminal structured to detect said at least one media node, | This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, to pair the thermostat to the smart hub, 'smart home devices' settings followed by "Z-wave" and "Add Node" settings are selected on the hub to pair with the thermostat. Further, when the thermostat's side button is held for 6 seconds, it starts searching ("said at least one media terminal being structured to detect said at least one media node") for the Z-wave network, and upon clicking the Connect button for the searched network, the thermostat is paired with the smart hub.<br><br>Furthermore, once the thermostat is connected to the smart hub, the smart hub allows users to control the thermostat by providing various functionalities on the smart hub such as changing room temperature, selecting different modes, and adjusting heating types. Therefore, it would be apparent to a person having ordinary skill in the art that the smart hub stores the settings to adjust the temperature on the thermostat.<br><br>  <br><br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat (annotated) |

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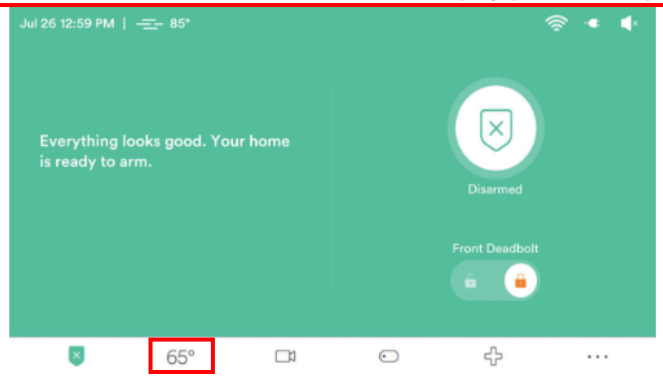
## Vivint Smart Hub - Adjust Thermostat

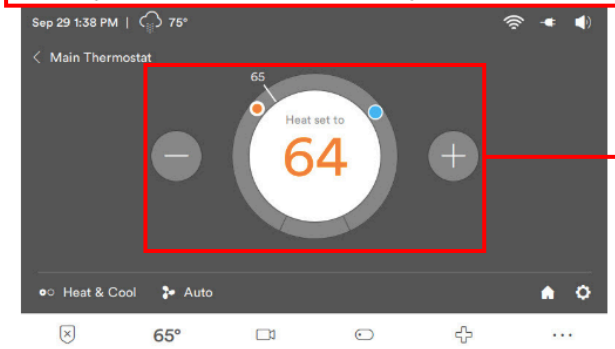
*How to adjust the thermostat temperature from the Smart Hub:*

1. From the home screen of the Smart Hub display, press the **Temperature** display icon on the bottom menu bar.




Source: https://support.vivint.com/article/Smart-Hub-Adjust-Thermostat

2. The temperature the thermostat is heating or cooling to will be displayed in the center. The current temperature in the home will be the smaller number on the edge of the circle. If you have more than one thermostat you will need to select the thermostat you want to adjust before you can change any settings.




Adjust Temperature

3. If the thermostat mode in the lower left corner is set to **Heat and Cool** you will need to tap on the orange or blue dot to change their temperature settings using the **Plus (+)** and **Minus(-)** icons.

Source: https://support.vivint.com/article/Smart-Hub-Adjust-Thermostat (annotated)

Complaint, Exhibit 3.

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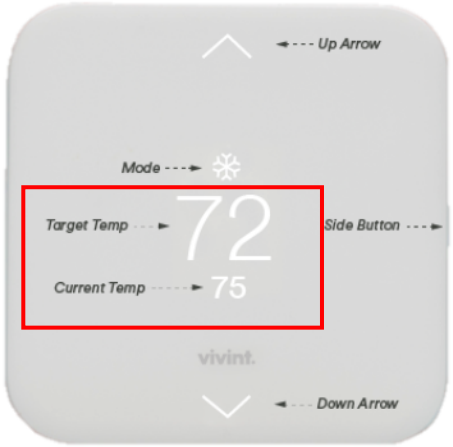
| |  <br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat<br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [21.5] a communication link structured to dispose said at least one media terminal and said at least one media node in a communicative relation with one another via | Company provides a communication link structured to dispose said at least one media terminal and said at least one media node in a communicative relation with one another via said interactive computer network.<br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br>For example, when the pairing process is complete, a link ("communicative relation") is established between the thermostat and the smart hub via Z-wave protocol ("said interactive computer network") such that the user adjusts the temperature on the thermostat via the smart hub. |

Complaint, Exhibit 3.

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| said interactive computer network, | One of the biggest benefits of smart home protocols is they can connect seamlessly to your mobile device or a central control panel like the Vivint Smart Hub.<br><br>This means you can use your smartphone or smart hub to do things like arm your security system, adjust the room's temperature, or lock the doors.<br><br>Below are some of the most popular smart home protocols:<br><br>• Z-Wave<br><br>Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br><br>**Smart home hub**<br><br>Think of a smart hub as the heart of your house — it connects all smart devices to create the right home automation experience.<br><br>Through the Vivint Smart Hub, you can control your door locks, view real-time camera footage of your home, and adjust the temperature — all through a single control panel.<br><br>Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [21.6] said communication link being initiated by said at least one media terminal | Company provides communication link being initiated by said at least one media terminal.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, to pair the thermostat with the smart hub, 'smart home devices' settings are selected on the hub. Further, "Z-wave" and "Add Node" settings are selected to pair with the thermostat ("said communication link being initiated by said at least one media terminal"). |

Complaint, Exhibit 3.

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| | **Pair a thermostat to the panel/hub:**<br>1. Unlock the unit's Installer Toolbox from the Site Manager software.<br>2. From the panel/hub home screen, select the menu icon (...) then **Software Version**.<br>3. Use the 4-digit code that appeared in Site Manager after unlocking the Installer Toolbox.<br>4. Select **Smart Home Devices**.<br>5. Select **Z-Wave**.<br>6. Select **Add Node**.<br>7. On the thermostat, hold the Vivint Smart Thermostat's side button down for about 6-10 seconds (there is a screen that will pop up after 2 seconds, the second Installer screen will pop up at about 6 seconds).<br>8. Go down to **Installer**.<br>9. Select **Network**.<br>10. Select **Connect**.<br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [21.7] said at least one digital media file structured to be selectively transmitted between said at least one media node and said at least one media terminal, wherein | Company provides at least one digital media file structured to be selectively transmitted between said at least one media node and said at least one media terminal.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, after the pairing process is complete, the smart hub allows the users to adjust the temperature settings for the thermostat directly from the smart hub. When the user modifies the room temperature using the smart hub, the adjusted temperature is reflected on the connected thermostat device as the target temperature. Therefore, it would be apparent to a person having ordinary skill in the art that the modified temperature instruction ("digital media file") is transmitted from the smart hub to the thermostat via the established link. |

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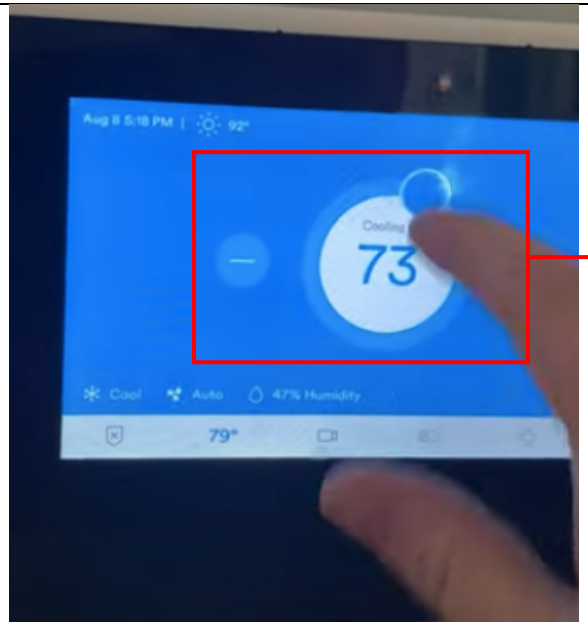
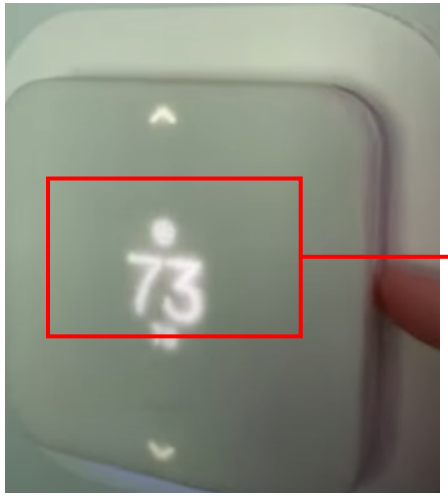



User adjusting temperature to 73° F via smart hub

Source: https://www.youtube.com/watch?v=NT36UmzH1A0, at 0:10 (annotated)




Modified temperature (73° F) being displayed on thermostat device

Source: https://www.youtube.com/watch?v=NT36UmzH1A0, at 0:57 (annotated)

Complaint, Exhibit 3.

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| | Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [21.8] said communication link is structured to bypass at least one media terminal security measure. | Company provides communication link is structured to bypass at least one media terminal security measure.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, once the devices are paired, a link is established between them, enabling the users to adjust the thermostat's temperature settings directly from the smart hub without the need to regularly pair the devices. As pairing is not necessary each time to make temperature adjustments via the smart hub, it would be apparent to a person having ordinary skill in the art that the established communication link is designed to bypass security measures related to the smart hub.<br><br>**Pair a thermostat to the panel/hub:**<br><br>1. Unlock the unit's Installer Toolbox from the Site Manager software.<br>2. From the panel/hub home screen, select the menu icon (...) then **Software Version**.<br>3. Use the 4-digit code that appeared in Site Manager after unlocking the Installer Toolbox.<br>4. Select **Smart Home Devices**.<br>5. Select **Z-Wave**.<br>6. Select **Add Node**.<br>7. On the thermostat, hold the Vivint Smart Thermostat's side button down for about 6-10 seconds (there is a screen that will pop up after 2 seconds, the second Installer screen will pop up at about 6 seconds).<br><br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [22] The digital media communication protocol recited in | Company provides digital media communication protocol recited in claim 21 wherein said communication link is structured to bypass at least one wireless range security measure.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, once the devices are paired, a link is established between them, enabling the users to adjust the thermostat's temperature settings directly from the smart hub without the need to regularly pair the devices. As pairing is not necessary |

Complaint, Exhibit 3.

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| claim 21 wherein said communication link is structured to bypass at least one wireless range security measure. | each time to make temperature adjustments via the smart hub, it would be apparent to a person having ordinary skill in the art that the said communication link is structured to bypass Z-Wave ("at least one wireless range") security measure.<br><br>**Pair a thermostat to the panel/hub:**<br>1. Unlock the unit's Installer Toolbox from the Site Manager software.<br>2. From the panel/hub home screen, select the menu icon (...) then **Software Version**.<br>3. Use the 4-digit code that appeared in Site Manager after unlocking the Installer Toolbox.<br>4. Select **Smart Home Devices**.<br>5. Select **Z-Wave**.<br>6. Select **Add Node**.<br>7. On the thermostat, hold the Vivint Smart Thermostat's side button down for about 6-10 seconds (there is a screen that will pop up after 2 seconds, the second Installer screen will pop up at about 6 seconds).<br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [23.P] A digital media communication protocol, comprising: | Vivint ("Company") performs and/or induces others to perform a method of digital media communication protocol.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, Company provides a home security system, which includes automation products such as thermostats (used herein as an exemplary product), locks, cameras, and lighting. Further, these products operate using a smart home protocol ("digital media communication protocol") that enables devices to communicate with each other, exchange information, and control functions. |

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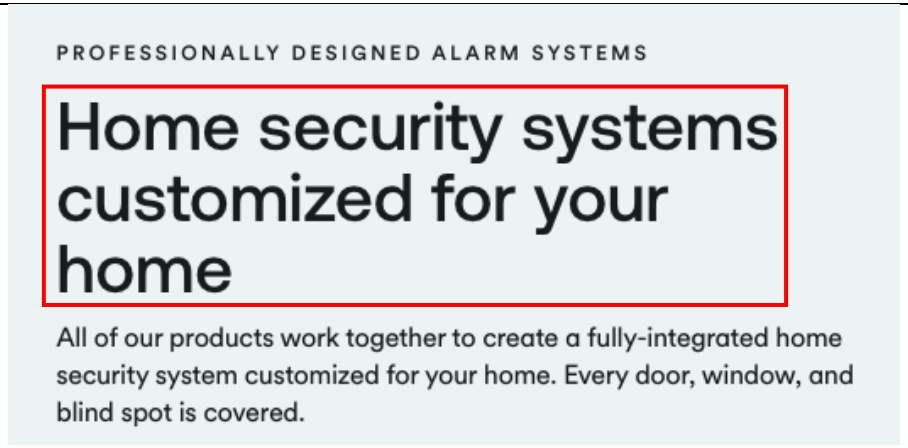
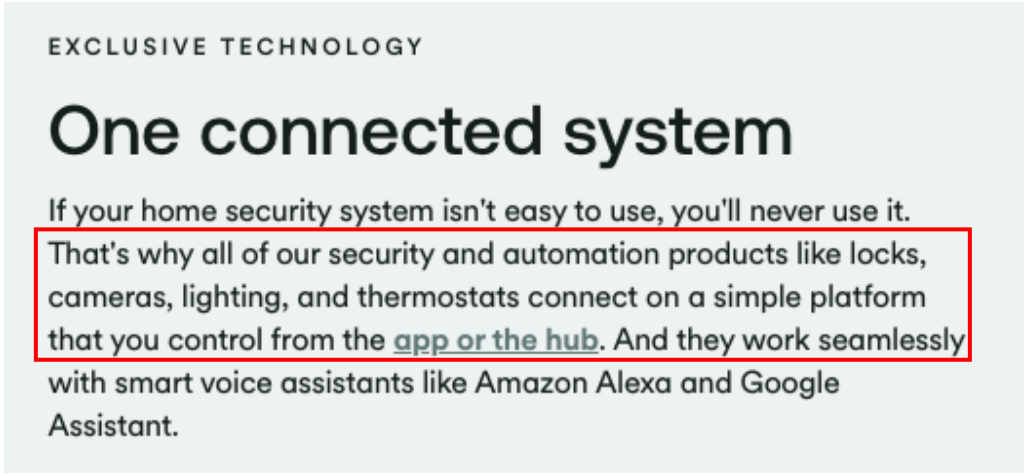



Source: https://www.vivint.com/packages/home-security




Source: https://www.vivint.com/packages/home-security

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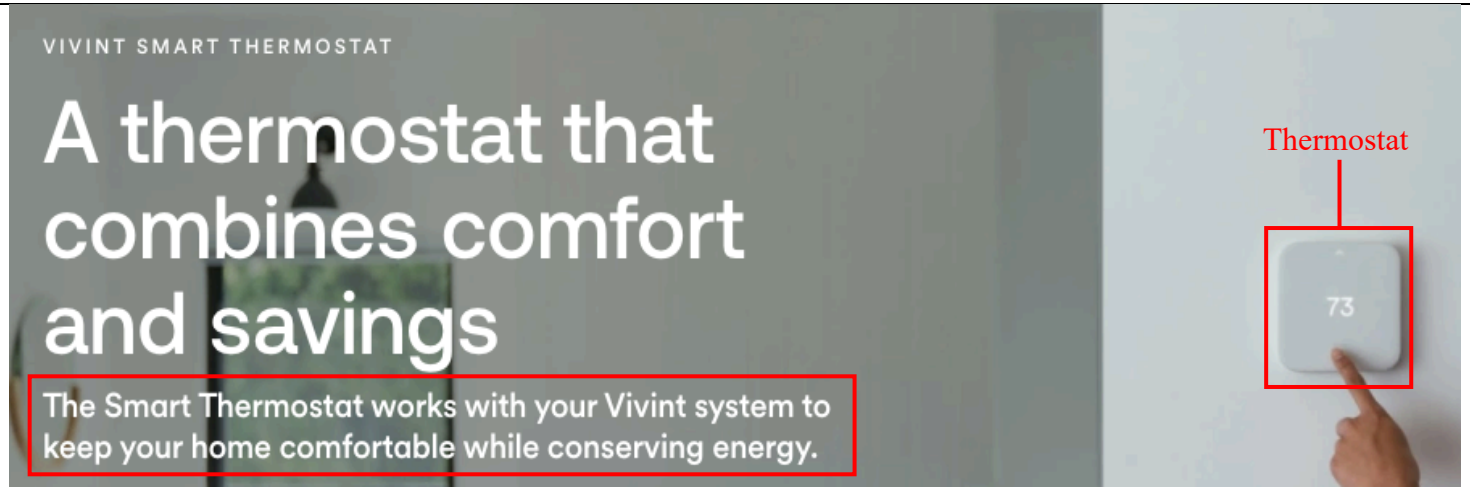
| |  <br>Source: https://www.vivint.com/products/smart-thermostat (annotated)<br><br>**What is a smart home protocol?**<br>Think of a smart home protocol as a universal language that smart devices use to communicate with each other, exchange information, and control functions.<br><br>In other words, smart home protocols allow devices to send signals to other devices to perform an action, such as turning on the lights when the doors unlock.<br>Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [23.1] at least one media terminal disposed in an accessible | Company provides an at least one media terminal disposed in an accessible relation to at least one interactive computer network.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents. |

Complaint, Exhibit 3.

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| relation to at least one interactive computer network, | For example, the smart thermostat is connected ("accessible relation") to the Vivint smart hub ("one media terminal") through the Z-wave smart home protocol ("at least one interactive computer network").<br><br>One of the biggest benefits of smart home protocols is they can connect seamlessly to your mobile device or a central control panel like the Vivint Smart Hub.<br><br>This means you can use your smartphone or smart hub to do things like arm your security system, adjust the room's temperature, or lock the doors.<br><br>Below are some of the most popular smart home protocols:<br><br>• Z-Wave<br><br>Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br><br>**Pair a thermostat to the panel/hub:** — Media terminal<br><br>1. Unlock the unit's Installer Toolbox from the Site Manager software.<br>2. From the panel/hub home screen, select the menu icon (...) then **Software Version**.<br>3. Use the 4-digit code that appeared in Site Manager after unlocking the Installer Toolbox.<br>4. Select **Smart Home Devices**.<br>5. Select **Z-Wave**.<br>6. Select **Add Node**.<br>7. On the thermostat, hold the Vivint Smart Thermostat's side button down for about 6-10 seconds (there is a screen that will pop up after 2 seconds, the second Installer screen will pop up at about 6 seconds).<br>8. Go down to **Installer**.<br>9. Select **Network**.<br>10. Select **Connect**.<br><br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat (annotated) |

Complaint, Exhibit 3.

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| | **Specs**<br><br>Color: White<br>Size: 4.5″ h x 4.5″ w x 0.9″ d<br>Weight: 10.1 oz (with batteries)<br>Power: 4 AA batteries or 24V AC wired from HVAC system<br>Screen: On-screen control<br>Sensors: Temperature, humidity, proximity, and ambient light<br>Supported Fuels: Natural gas, propane, electric, fuel oil, and geothermal<br>Compatibility: Works with conventional forced air, radiant, and heat pump, with up to 3 stages of heating and up to 2 stages of cooling<br>Connectivity: Z-Wave<br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [23.2] a wireless range structured to permit authorized access to said at least one interactive computer network, | Company provides a wireless range structured to permit authorized access to said at least one interactive computer network.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, to pair the thermostat device with the smart hub, the thermostat device must be within the range of 100 meters ("a wireless range") of the Z-wave protocol. Further, Z-Wave network and devices in the Z-wave network are identified with their respective unique IDs. The unique IDs prevents unauthorized devices to access the Z-wave network. Therefore, upon information and belief, the thermostat devices that are within the wireless range of the Z-wave protocol are structured to permit authorized access to pair with the smart hub. |

Complaint, Exhibit 3.

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| | **How far do Z-Wave connections reach?**<br>Z-Wave uses a mesh network topology, meaning the more devices you have in the same space, the stronger the network will be.<br>Z-Wave has a range of 328 feet in open air (or 100 meters).<br>Building materials may reduce this range, so try to have a Z-Wave device every 30 feet or closer.<br>Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br>In terms of identification and authorization, each Z-Wave network is identified by a network ID and each end device is identified with a node ID. The unique network ID prevents, for example, one Z-Wave-equipped house from controlling devices in another similarly equipped house.<br>Source: https://www.techtarget.com/iotagenda/definition/Z-Wave<br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [23.3] at least one media node disposed within said wireless range, | Company provides an at least one media node disposed within said wireless range, wherein said at least one media node is detectable by said at least one media terminal.<br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br>For example, the smart hub is paired to the thermostat ("one media node") when it is located within the range of the Z-Wave protocol ("disposed within said wireless range"). Further, during pairing, the smart hub searches for the nearby thermostat devices to get paired ("one media node is detectable by said at least one media terminal"). |

Complaint, Exhibit 3.

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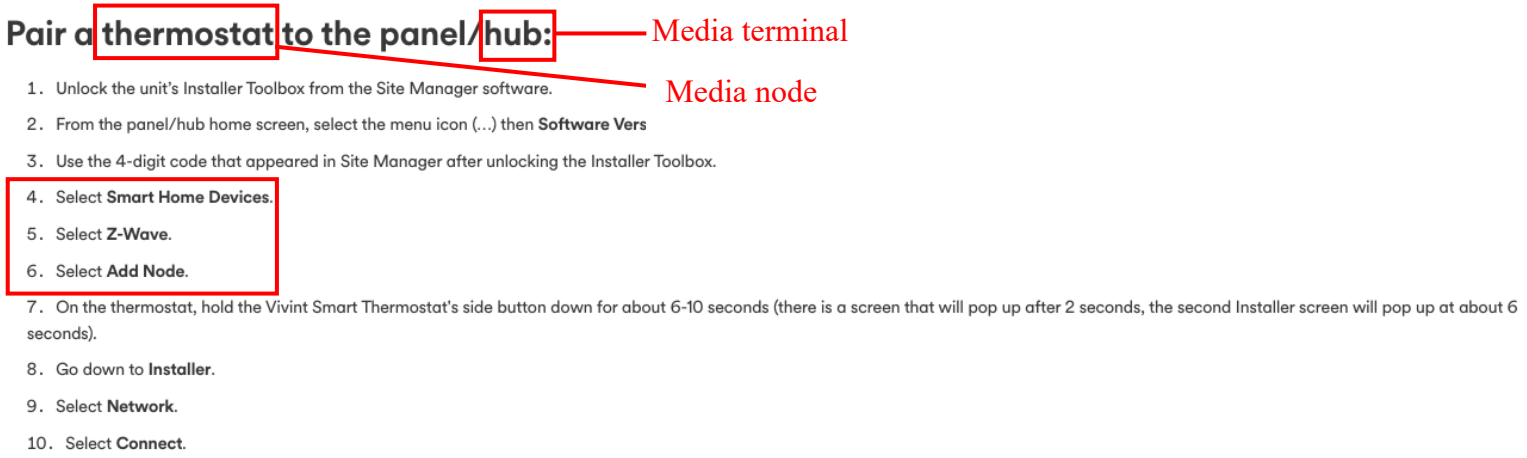
| wherein said at least one media node is detectable by said at least one media terminal, | While Z-Wave has a range of 100 meters or 328 feet in open air, building materials reduce that range, it is recommended to have a Z-Wave device roughly every 30 feet, or closer for maximum efficiency. The Z-Wave signal can hop roughly 600 feet, and Z-Wave networks can be linked together for even larger deployments. Each Z-Wave network can support up to 232 Z-Wave devices allowing you the flexibility to add as many devices as you'd like to make sure your Smart Home is working it's hardest.<br><br>Source: https://www.z-wave.com/learn<br><br>  <br><br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat (annotated)<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [23.4] at least one digital media file disposed on said at least | Company provides an at least one digital media file disposed on said at least one media node, said at least one media terminal being structured to detect said at least one media node.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents. |

Complaint, Exhibit 3.

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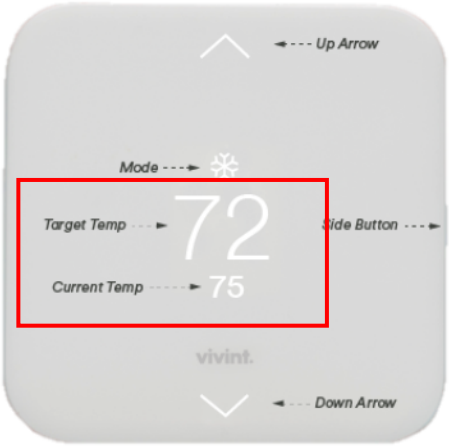
| one media node, said at least one media terminal being structured to detect said at least one media node, | For example, the thermostat displays a current temperature and a target temperature ("digital media file initially disposed on said at least one media node") and the same reading is reflected on the smart hub.<br><br>Further, to pair the thermostat and the smart hub, 'smart home devices' settings followed by "Z-wave" and "Add Node" settings are selected on the hub to pair with the thermostat. Furthermore, when the thermostat's side button is held for 6 seconds, it becomes detectable for the Z-wave network ("said at least one media terminal being structured to detect said at least one media node"), and upon clicking the Connect button for the searched network, the thermostat is paired with the smart hub.<br><br>  <br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat |

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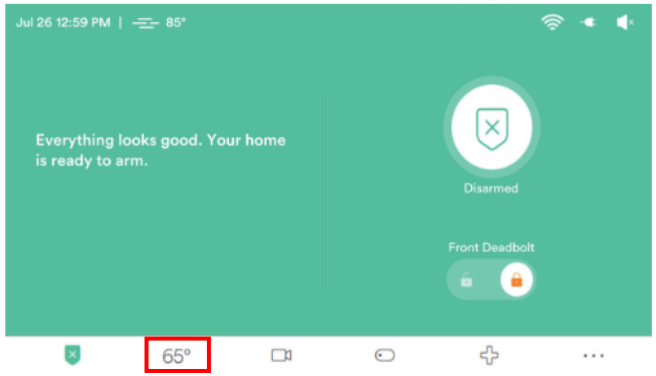
## Vivint Smart Hub - Adjust Thermostat

*How to adjust the thermostat temperature from the Smart Hub:*

1. From the home screen of the Smart Hub display, press the **Temperature** display icon on the bottom menu bar.




Source: https://support.vivint.com/article/Smart-Hub-Adjust-Thermostat

## Pair a thermostat to the panel/hub:

Media terminal

Media node

1. Unlock the unit's Installer Toolbox from the Site Manager software.
2. From the panel/hub home screen, select the menu icon (...) then **Software Version**.
3. Use the 4-digit code that appeared in Site Manager after unlocking the Installer Toolbox.
4. Select **Smart Home Devices**.
5. Select **Z-Wave**.
6. Select **Add Node**.
7. On the thermostat, hold the Vivint Smart Thermostat's side button down for about 6-10 seconds (there is a screen that will pop up after 2 seconds, the second Installer screen will pop up at about 6 seconds).
8. Go down to **Installer**.
9. Select **Network**.
10. Select **Connect**.

Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat

Complaint, Exhibit 3.

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| | Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [23.5] a communication link structured to dispose said at least one media terminal and said at least one media node in a communicative relation with one another via said at least one interactive computer network, | Company provides a communication link structured to dispose said at least one media terminal and said at least one media node in a communicative relation with one another via said at least one interactive computer network.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, when the pairing process is complete, a link ("communicative relation") is established between the thermostat and the smart hub via Z-wave protocol ("said at least one interactive computer network").<br><br>**Pair a thermostat to the panel/hub:**<br><br>1. Unlock the unit's Installer Toolbox from the Site Manager software.<br>2. From the panel/hub home screen, select the menu icon (...) then **Software Version**.<br>3. Use the 4-digit code that appeared in Site Manager after unlocking the Installer Toolbox.<br>4. Select **Smart Home Devices**.<br>5. Select **Z-Wave**.<br>6. Select **Add Node**.<br>7. On the thermostat, hold the Vivint Smart Thermostat's side button down for about 6-10 seconds (there is a screen that will pop up after 2 seconds, the second Installer screen will pop up at about 6 seconds).<br>8. Go down to **Installer**.<br>9. Select **Network**.<br>10. Select **Connect**.<br><br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat<br><br>One of the biggest benefits of smart home protocols is they can connect seamlessly to your mobile device or a central control panel like the Vivint Smart Hub.<br><br>This means you can use your smartphone or smart hub to do things like arm your security system, adjust the room's temperature, or lock the doors.<br><br>Below are some of the most popular smart home protocols:<br><br>• Z-Wave |

Complaint, Exhibit 3.

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| | Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br><br>**Smart home hub**<br>Think of a smart hub as the heart of your house — it connects all smart devices to create the right home automation experience.<br><br>Through the Vivint Smart Hub, you can control your door locks, view real-time camera footage of your home, and adjust the temperature — all through a single control panel.<br><br>Source: https://www.vivint.com/resources/article/smart-home-technologies-guide<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [23.6] said communication link being initiated by said at least one media terminal and structured to bypass at least one media terminal security measure, | Company provides a communication link being initiated by said at least one media terminal and structured to bypass at least one media terminal security measure.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, to pair the thermostat with the smart hub, 'smart home devices' settings followed by the 'Z-wave' and 'Add Node' settings are selected on the hub to pair with the thermostat ("said communication link being initiated by said at least one media terminal"). Further, once the devices are paired, a link is established between them, enabling the users to adjust the thermostat's temperature settings both from the thermostat and the smart hub as they are integrated with each other. As pairing is not necessary each time to make temperature adjustments via the smart hub, it would be apparent to a person having ordinary skill in the art that the established communication link is designed to bypass security measures related to the smart hub. |

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| | **Pair a thermostat to the panel/hub:**<br>1. Unlock the unit's Installer Toolbox from the Site Manager software.<br>2. From the panel/hub home screen, select the menu icon (...) then **Software Version**.<br>3. Use the 4-digit code that appeared in Site Manager after unlocking the Installer Toolbox.<br>4. Select **Smart Home Devices**.<br>5. Select **Z-Wave**.<br>6. Select **Add Node**.<br>7. On the thermostat, hold the Vivint Smart Thermostat's side button down for about 6-10 seconds (there is a screen that will pop up after 2 seconds, the second Installer screen will pop up at about 6 seconds).<br>8. Go down to **Installer**.<br>9. Select **Network**.<br>10. Select **Connect**.<br>Source: https://support.vivint.com/article/Smart-Properties-Element-Thermostat<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |
| [23.7] said media node structured to transmit said at least one digital media file to said media terminal via said communication link. | Company provides media node structured to transmit said at least one digital media file to said media terminal via said communication link.<br><br>This element is infringed literally, or in the alternative, under the doctrine of equivalents.<br><br>For example, after the pairing process is complete, the smart hub and the thermostat are connected to each other. Since, the smart hub and the thermostat are fully integrated, the temperature measured by the thermostat is reflected on the bottom of the smart hub screen. Therefore, it would be apparent to a person having ordinary skill in the art that the thermostat constantly syncs the temperature reading with the smart hub ("media node structured to transmit said at least one digital media file to said media terminal via said communication link").<br>**What is a smart thermostat?**<br>A smart thermostat, like the Vivint Smart Thermostat, uses built-in features like GPS, in-home sensors, and your personal preferences to automatically adjust your home's temperature. It also integrates with your smart home technology, allowing you to control your temperature from anywhere.<br>Source: https://www.vivint.com/products/smart-thermostat |

Complaint, Exhibit 3.

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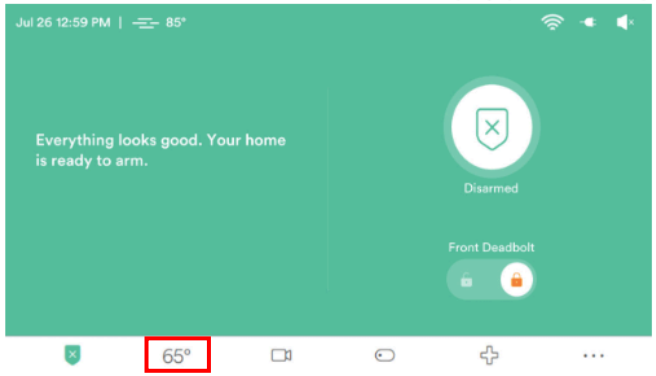
| | **Vivint Smart Hub - Adjust Thermostat**<br>*How to adjust the thermostat temperature from the Smart Hub:*<br>1. From the home screen of the Smart Hub display, press the **Temperature** display icon on the bottom menu bar.<br>  <br><br>Source: https://support.vivint.com/article/Smart-Hub-Adjust-Thermostat<br><br>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company. |

Complaint, Exhibit 3.

## 2. List of References


1. https://www.vivint.com/packages/home-security, last accessed on 08th February, 2023.
2. https://www.vivint.com/products/smart-thermostat, last accessed on 08th February, 2023.
3. https://www.vivint.com/resources/article/smart-home-technologies-guide, last accessed on 08th February, 2023.
4. https://support.vivint.com/article/Smart-Properties-Element-Thermostat, last accessed on 08th February, 2023.
5. https://support.vivint.com/article/Smart-Hub-Adjust-Thermostat, last accessed on 08th February, 2023.
6. https://www.youtube.com/watch?v=NT36UmzH1A0, last accessed on 08th February, 2023.
7. https://support.vivint.com/article/element-change-temperature, last accessed on 08th February, 2023.
8. https://www.z-wave.com/learn, last accessed on 08th February, 2023.
9. https://www.techtarget.com/iotagenda/definition/Z-Wave, last accessed on 08th February, 2023.